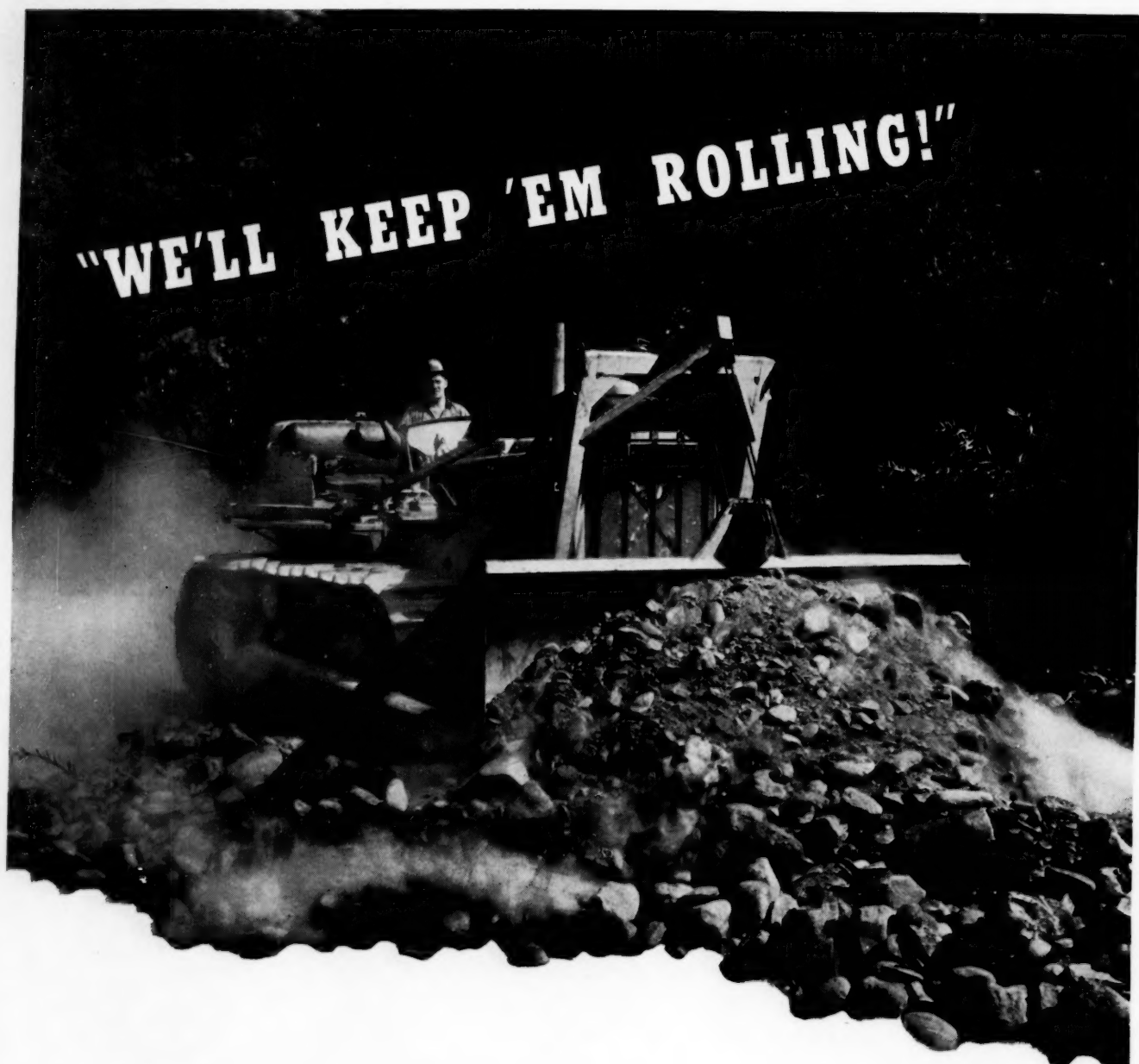


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MARINE CORPS
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MARCH, 1942



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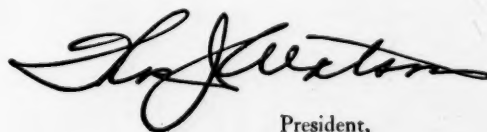
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THE MARINE CORPS GAZETTE

WASHINGTON, D. C.

Vol. 26

MARCH, 1942

No. 1

CONTENTS

COVER: REPRODUCED BY SPECIAL PERMISSION OF "THE SATURDAY EVENING POST," COPYRIGHT, 1941, BY THE CURTIS PUBLISHING COMPANY.

AN AERIAL BLITZKRIEG IN MINIATURE.....	7
FIGHTING AND WRITING: THE TWO "G's"?.....	9
MINIATURE RANGE FOR ANTI-MECHANIZED TRAINING.....	11
STREAMLINING ADMINISTRATION.....	16
A SIMPLE APTITUDE EXAMINATION.....	17
THEY HAD A WORD FOR IT.....	18
MOVING TARGET RANGE FIXTURES.....	20
NEITHER FISH NOR FOWL.....	24
WARRANT OFFICERS PROMOTED TO COMMISSIONED RANK.....	27
ALMANAC OF THE MARINE CORPS (Continued).....	28
NOT SINGLE HANDED.....	34
STAMPING AND FORMING.....	36
LT. ROBERT L. SKIDMORE, U.S.M.C., RET., ORDERED TO ACTIVE DUTY.....	42

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—Lieut. General T. Holcomb.

January 31, 1942.

THE MARINE CORPS GAZETTE

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MARCH, 1942

No. 1

An Aerial Blitzkrieg in Miniature

BY VERNON E. MEGEE, LT.-COL., U.S.M.C.

(Written for the Marine Corps Gazette)

TIME was, and not so long ago at that, when the subject of small wars was professionally dear to the soul of the Marine officer. Minor operations against irregular forces has long been the forte of our Corps, and save for the interlude with the Second Division in France, our Corps history reads like a tactical treatise on the operations of comparatively small groups in difficult climes and terrain. However, these last two years, with their frantic expansion and planning for "the big picture," have put the banana fighters definitely in the shade in favor of armored columns, parachutists, and full scale streamlined divisions. Our military journals are concerned only with the minutiae of making war in the grand manner; many of our junior officers speak only the language of landing operations and defense battalions. Lest we forget our ancient and honored role completely, perhaps it might be wise to pause and reflect on what is happening today to the concepts of small war tactics.

During the recent brief but violent border fighting between Peru and Ecuador, there occurred a series of incidents which demonstrated rather effectively some modern methods of fighting a small war. There are worthy lessons to be drawn from these operations—lessons which begin where our Nicaraguan episode ended. It is believed that the record merits inspection.

On July 23, this year, after several months of tension along the Peruvian-Ecuadorean frontier and some isolated skirmishing between border guards, a full scale battle on a thirty kilometer front along the Zarumilla river began with the dawn. The number of troops engaged might have equalled a brigade on each side, fairly well equipped with rifles, machine guns and some field artillery. On the Peruvian side there was also a company or so of light tanks. The forces appeared to be fairly well matched—except for one significant fact. The Peruvians had a small air force; their opponents had none. The Peruvians also had control of the sea, which in this case was represented by the Gulf of Guayaquil.

During the growing period of tension preceding hostilities, the Peruvian fighting squadron belonging to the Northern Group based at Chiclayo was detached to an advanced airdrome at Talara, with an auxiliary field at Tumbes, some twenty kilometers behind the frontier. A cooperative squadron of five ancient English Fairey planes

was attached directly to the Army command and based at Tumbes, which was the headquarters of the general commanding. The remainder of the Northern Group, consisting of a squadron of Caproni bombers and a squadron of single engine Caproni transports, remained at Chiclayo, alerted. The Peruvian Air Force, it might be said, is an independent organization, but in this instance the Army general commanding had been designated as supreme commander over all land, sea, and air forces in the northern area. Consequently, the air group was under his direct control, without further reference to air force headquarters in Lima. The Army general staff had not previously, in maneuvers, exercised this control, therefore, the initial employment of aviation was somewhat faulty, to say the least.

During the early stages of the battle, the Peruvian forces uncovered several strong points along the north bank of the Zarumilla River defended by machine guns, field artillery and Breda 20-mm. anti-tank and anti-aircraft guns. Without waiting to bring their own artillery strength into full play, the Army command immediately called for air bombing of these front line positions. The fighting squadron commander dispatched a flight of American monoplane fighters, armed with fragmentation bombs, and thoroughly dive-bombed the Ecuadorean artillery positions. Due to poor weather conditions the fighters were forced to work at dangerously low altitudes, resulting in the loss of one of their number shot down by machine gun fire. Later in the day the Caproni bomber squadron coming up from Chiclayo also attacked these positions, the combined fire of air and ground forces serving to soften the defense so that the ground forces were able to cross the river at certain points. Considering that the Peruvian army had a definite artillery superiority, the reckless employment of their aviation forces against front line strong points seems hardly justified. Aviation is an expensive substitute for field artillery.

The air force headquarters in Lima then took a hand in the situation, transferring an air commander and staff to the frontier. The employment of air forces thereafter was more effective, being directed toward nerve centers on the Ecuadorean lines of communications.

As can be seen from the map, there were few usable roads on the Ecuadorean side, the principal line of supply



being by boat to Puerto Bolivar, thence by rail to Machala and Santa Rosa. This was supplemented by a passable truck road from Cuenca to Machala, thence to Chacras on the frontier. Distribution of supplies from Chacras to the posts along the river to the right and left was by poor roads and trails parallel to the front. The country north of the frontier is thorny jungle scrub, difficult of passage save by the few roads and trails. Thus there existed a series of bottlenecks on the lines of communications offering opportunities for effective air action. The Peruvian aviators began bombing bridges on the highway, truck columns, the railroad stations in Machala and Santa Rosa, and gunboats and launches plying between Guayaquil and Puerto Bolivar. This went on for several days, effectively impeding the flow of supplies and reinforcement to the Ecuadorean troops.

Meanwhile the Peruvian land forces had made good their crossing of the Zarumilla River, driving their opponents out of the frontier villages of Huaquillas, Chacras, Quebrada Seca, and Rancho Chico. The Ecuadorean army fought a strong delaying action at Arenillas, then retreated into the jungle and dispersed into guerilla bands. The Peruvians followed, but immediately ran into the same sort of situation that confronted our patrols in the Nicaraguan campaign. They were ambushed at every turn of the trails. The thick scrub prevented any effective tactical maneuvering, so the Ecuadorean rear guard was able to inflict considerable punishment and delay on the pursuing

columns. The tanks were of little use save on the roads.

It is quite possible that the Ecuadorean commander would have succeeded in falling back on his line of communications to the supplies he had stored along the railroad, and the campaign might have dragged on for months, save for a series of daring air actions which took a page out of the Blitzkrieg book of tactics and definitely ended the campaign in the space of a few hours. It is with this last day's operations, that this report is mainly concerned.

On July 31st, at about noon, five ancient Caproni transports of the type Mussolini used in Ethiopia, preceded by a flight of Northrop attack bombers, appeared to the southward of Santa Rosa coming in at low altitude. The transports landed without more ado, while the attack planes passed on to divert the garrison at Santa Rosa. Squads of air infantry, complete down to tommy guns, were spewed out as the lumbering Capronis came to rest. In a very few minutes the airdrome was taken and a strong holding force thrown out in the direction of the village. The Capronis took off for another journey to the accompaniment of a scattering fusillade of rifle shots. By the time the second wave of troops was disembarked, the Ecuadorean garrison, surprisingly weak, had fled, firing the village and abandoning their supplies. Santa Rosa was definitely in the hands of the Peruvian air force.

At 3:00 P.M. of the same day, the operation was repeated at Machala, the planes skimming along the railroad

(Continued on page 63)

Fighting and Writing: the Two "G"'s?

BY CAPTAIN R. D. HEINL, JR., U.S.M.C.

THE orthodox four-section staff organization of our armed forces is as much taken for granted among officers as the law of gravity, say, or Euclid. Yet today we have physics beyond Newton as well as non-Euclidian mathematics: may we not with propriety reexamine our staff divisions and functions?

Our prescribed staff, with its four sections for personnel, intelligence, operations and supply, all under supervision of an executive or chief of staff, is the product of roughly two centuries of military thought and evolution from Marlborough through Frederick and Napoleon to the elder Moltke and Foch. It presents an excellent fundamental division of responsibilities for the control of larger or higher formations such as the stabilized mass-war of 1918 inevitably begat. But the nature of combat has greatly changed in the past two decades, and we now face situations, especially in the lower formations, in which the five-paragraph mimeographed operation-order and the hydra-headed staff may well turn out to be unnecessarily complex and cumbersome for the accelerated conduct of operations.

Napoleon it was, with his French flair for the *mot juste*, who divided staff functions into two branches: fighting and writing. To implement these, he added a service of liaison, or communications, as we should now term it, "Fighting," in our day, embraces the conduct of operations: "writing," more broadly, that of all administration. For the staff of a unit engaged in active field service, Napoleon's division has the ring of true merit. Let us reduce it in effect and composition to our own military vocabulary.

A staff could be organized, inverted-Y fashion, into two sections working directly under the commander, in battalions and regiments at least, without benefit of executive officer. The first section, devoted entirely to the conduct of and preparation for combat, would comprise the following: operations and training; intelligence; communications; gas (all chemical measures). This section would retain the title of our present third: operations and training. The second section would embrace all measures of administration, and would be so designated. Its component subdivisions would be: personnel; supply; transportation; medical. In the battalion, naturally, many of the foregoing functions could be grouped under single officers, while in the regiment—and progressively upward—it would become advantageous to assign individuals to each component function.

In the rifle battalion* as now constituted, we have seven officers performing staff functions: the executive, adjutant, intelligence officer, plans and training officer, quartermaster, communication officer and medical officer. In addition

to his staff duties, the executive also exercises general supervision over the affairs of the entire battalion. By rearranging the staff into two sections, of operations and of administration, we may so regroup the functions that the same work can be accomplished by five officers as follows: operations and intelligence officer (these two functions are so naturally related that—particularly in smaller units—it becomes necessary for the Bn-3 virtually to parallel the ratiocinations of the Bn-2); communication officer (with additional duties in charge of chemical defense); personnel officer (adjutant); supply and transportation officer (quartermaster); medical officer. Thus it appears that we can effect an economy of two officers. Judged by criteria of efficiency, it seems reasonable to eliminate the executive, who, in small organizations—and frequently with the best of intentions—can too easily become a bottleneck or fifth wheel. The combination of operations and intelligence appears as natural as ham and eggs. In order to perform his operations duties with any semblance of competence, this officer must have a crystal-clear picture of the intelligence-situation, which, again in lower units, is usually to be apprehended without too much meditation. For the communication officer to supervise chemical measures appears at first to be a strange marriage, but the relative simplicity of his chemical functions is such that they could readily be performed with the aid of a well-trained noncommissioned assistant. On the administration side, the adjutant functions as before. The quartermaster is likewise much the same, except that to emphasize the importance of transportation in modern war, we consider it as a separate staff function. Naturally, in the battalion, both supply and transportation can be controlled by a single officer. The medical section requires no comment.

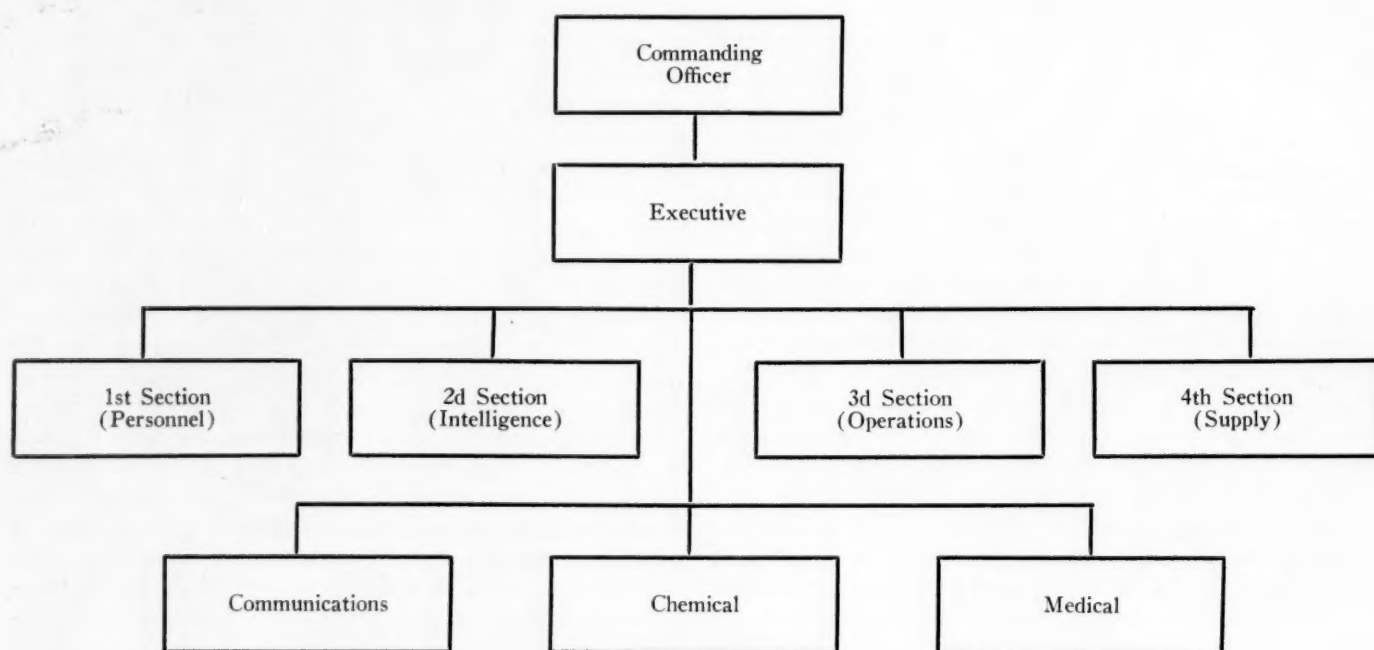
Having viewed a static cross-section of the two-section staff, let us try to visualize it in action. At first glance, it appears that by eliminating one executive officer, we have substituted two, one for each of the two sections. This, however, is not the case, because, whereas the executive exercised direction over the battalion as a whole, staff and line (and frequently paralleled, duplicated or collided with the unit-commander), the commanding officer in this organization alone directs. His two staff-sections may advise and assist him; he, in turn, may employ their facilities for transmission of orders, but it is nevertheless Himself (as the Irish would say) that give the orders. To conduct combat-operations, or to supervise combat-training, the commander needs but to consult or employ a single section in which are included all the functions appropriate to battle. Conversely, when faced with an administrative problem, the commanding officer turns to his "writing" section. Summarized, the advantages of two-section staffs

*Tentative organization tables, Marine Division, Marine Corps Schools, 1941, Table D-6.

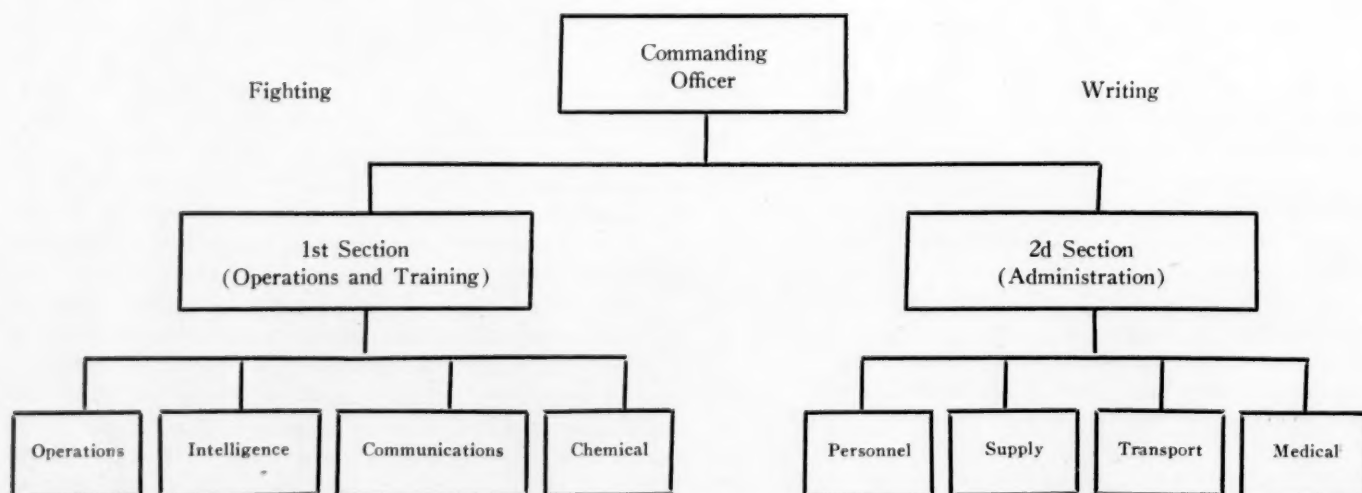
in operation are as follows: (1) economy of officers; (2) more administrative efficiency; (3) centralization of the functions of command at the top; (4) elimination of the middlemen between the unit commander and the commanders of his next subordinate combat-units; (5) simplicity.

Perhaps we make too much pother over schemes of organization; perhaps rearrangement of familiar elements to make a different outline on a chart is of military unimportance. That, at least, was the opinion of one brother-offi-

cer to whom the writer outlined the foregoing project for a two-section staff. "You could call 'em the Grand Wizard and the Kleagle if you wanted to, just so they made up a working team which got the jobs done," was his comment—and it is not without reason. Yet if we must send men into battle, can we afford to spare any effort or plan which will render combat less precarious? And if it be the Line which fights and the Staff which serves, does not the Line deserve the best in service?



(Above)
Chart showing distribution of functions and duties, orthodox, four-section staff.



(Above)
Chart showing distribution of functions and duties, proposed two-section staff.

Miniature Range for Anti-Mechanized Training

BY MARINE GUNNER JOHN A. BURNS, U.S.M.C., SIXTH MARINES

THE idea for this range was first conceived in the latter part of 1939, but due to various causes incident to the service it was not possible to complete construction and demonstrate its use until 25 June, 1941.

Upon taking charge of the Anti-Tank Platoon, Sixth Marines, and trying to carry out a progressive scheme of training, it was soon felt that some additional means should be available to give more comprehensive and realistic training to anti-mechanized units, especially to the gunners and gun captains of the gun crews.

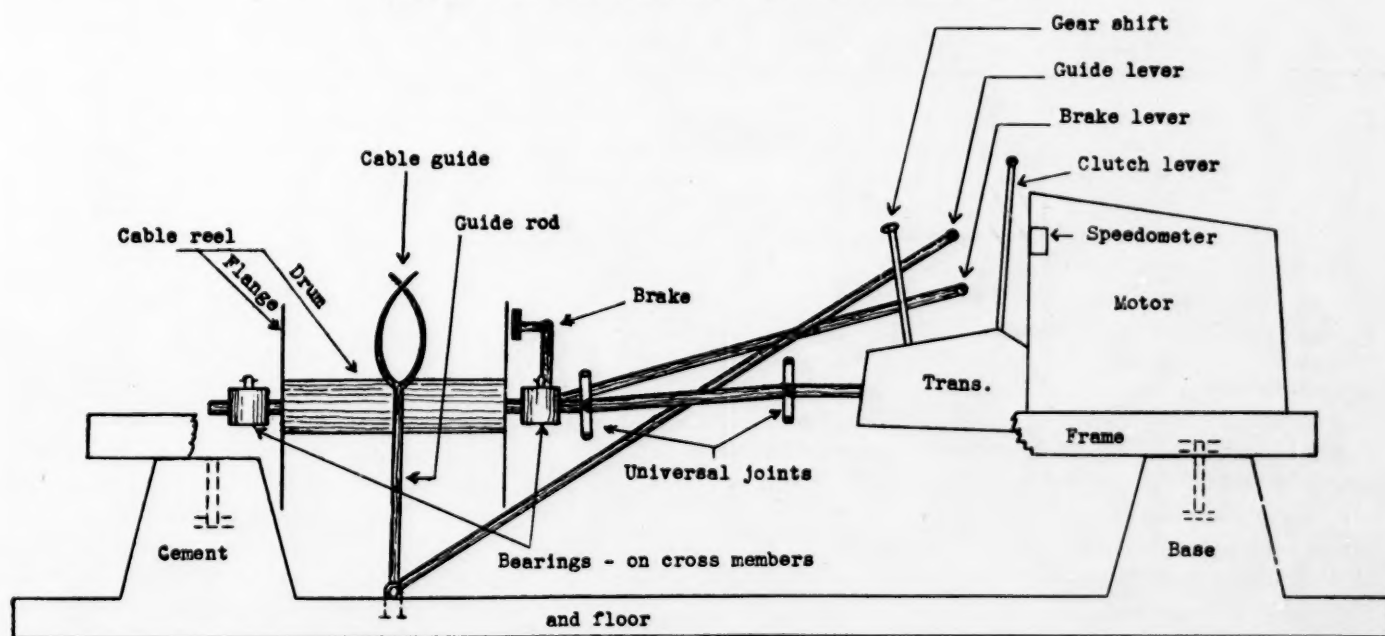
It is readily apparent that the job of a gun captain and gunner of an anti-mechanized weapon is not an easy or pleasant one in the face of a mass attack by tanks. At this time any confusion or slowness in the giving and receiving of fire orders or changes therein, and any hesitation on the part of the gunner to shift from one target to another, might prove fatal, or at least cause unnecessary casualties. Split seconds count. Some means should be used in training these key men and all crew members of anti-mechanized weapons to give them a picture as near-

ly as possible that which will confront them in actual combat.

We train our gun crews on the moving target range, and all members of the section and squad have a limited opportunity to perform their work, but on a single target or, probably, at most, two targets. The target changes direction and speed, changes in fire data are given—and it is likely that the gunner will be on with his first shot or burst and that a minimum of time will have elapsed. But, give an entirely new target, a terrain feature or some object of which there are several in the immediate area covered, and see what happens. The gun captain will have trouble in designating his target, he will have to stop and think, losing precious time. And it's a good bet that the gunner will be on the wrong target his first try, that is, if there are several similar objects nearby.

Our men should be so trained that they will instinctively do the right thing under all conditions, and it is believed that the best way to so train them is to simulate actual combat conditions as nearly as possible.

FIGURE 1.—CUT-AWAY SECTION OF TOWING POWER PLANT



NOTE: No Scale, for Guide Only.

FIGURE 2.—CHANGE PULLEY AND POST DETAILS

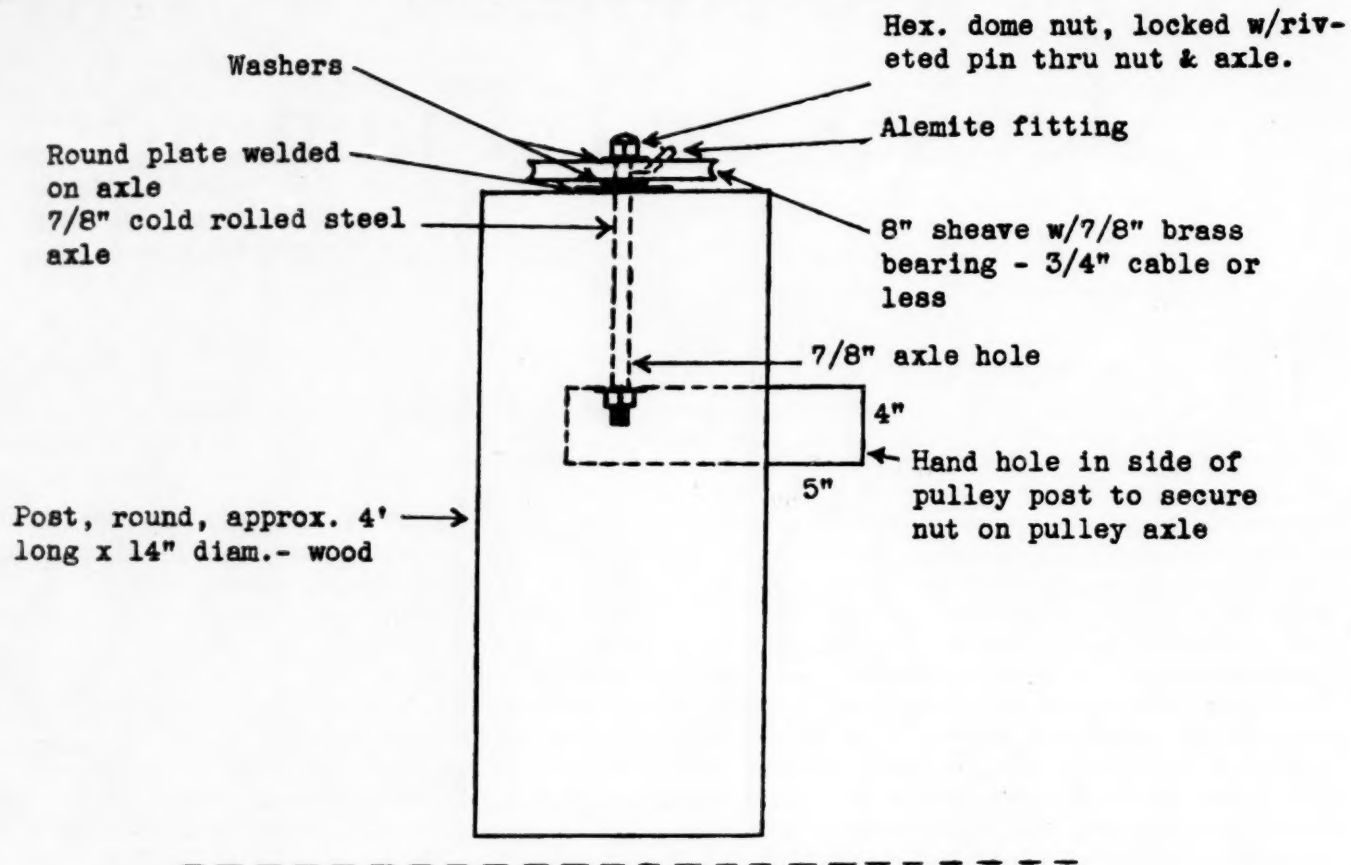


FIGURE 3.—CUT-AWAY SECTION SHOWING CHANGE PULLEY IN POSITION

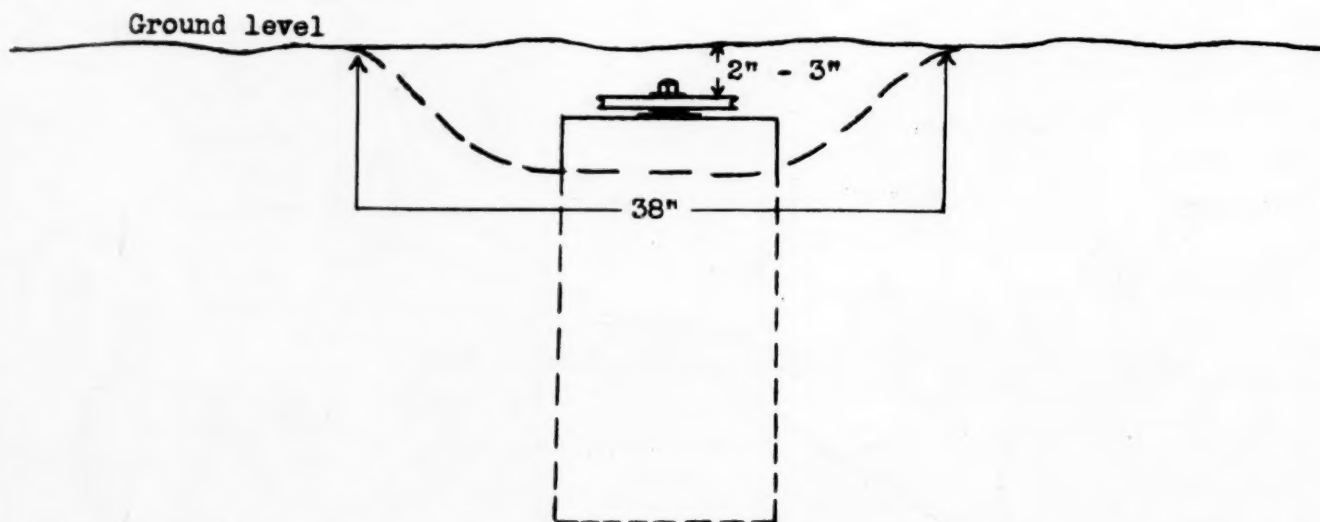
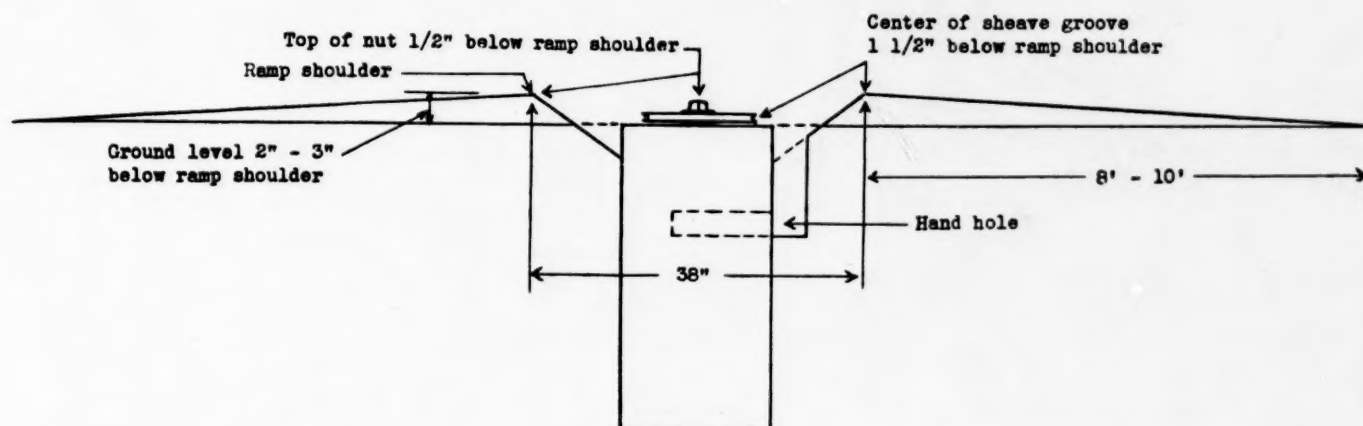


FIGURE 4.—CUT-AWAY SECTION SHOWING CHANGE PULLEY WITH CEMENT RAMP—NO CABLE GROOVES



One (1) change pulley installation on lines similar to that shown in Figure 4 was completed on M range, Camp Elliott, San Diego County, Calif., and experimented with before the writer was detached. From the lessons learned during these experiments it is believed that a change pulley installed as shown in Figure 4 will give very satisfactory results, and last longer than the change pulley shown in Figure 3, which has proved its value by being in use over one (1) year prior to July, 1941, without causing trouble. Figure 5 is a modification of Figure 4, in that grooves are provided so that the cable runs directly to and from the sheave and not over the ramp shoulder, down to the sheave and up over the shoulder again as it does in Figure 4. Any number of grooves may be cut in the ramp so that the target may come in on different courses.

This miniature range provides for simulated mass attack by tanks or other mechanized units. The number of such targets that can be in operation at one time is more or less optional. They can be made to travel at simulated speeds up to and over forty (40) miles per hour, stop, reverse direction, disappear, reappear, run in any direction desired in relation to the firing line—all at the will of the person in charge.

With the targets to be engaged moving as described above, the gun captain has an opportunity to actually select and give fire orders for the destruction of targets in the order of their relative menace to friendly positions. The gunner gets training in manipulating his gun, changing from target to target, and actually sees through his sights what appears to be a tank or other mechanized vehicle. All men see these targets in their relative size. It is my opinion that the training just noted is very important and that it should be stressed. In addition all principles and theory of anti-mechanized gunnery are employed in the use of the range. It is for .22 caliber ammunition, an important item when scarcity and cost of larger calibers are considered. It also gives a means of continuous training, at small cost, which is believed to be necessary to maintain gunnery efficiency even in a well trained unit. The cost of its construction is negligible.

BRIEF DESCRIPTION

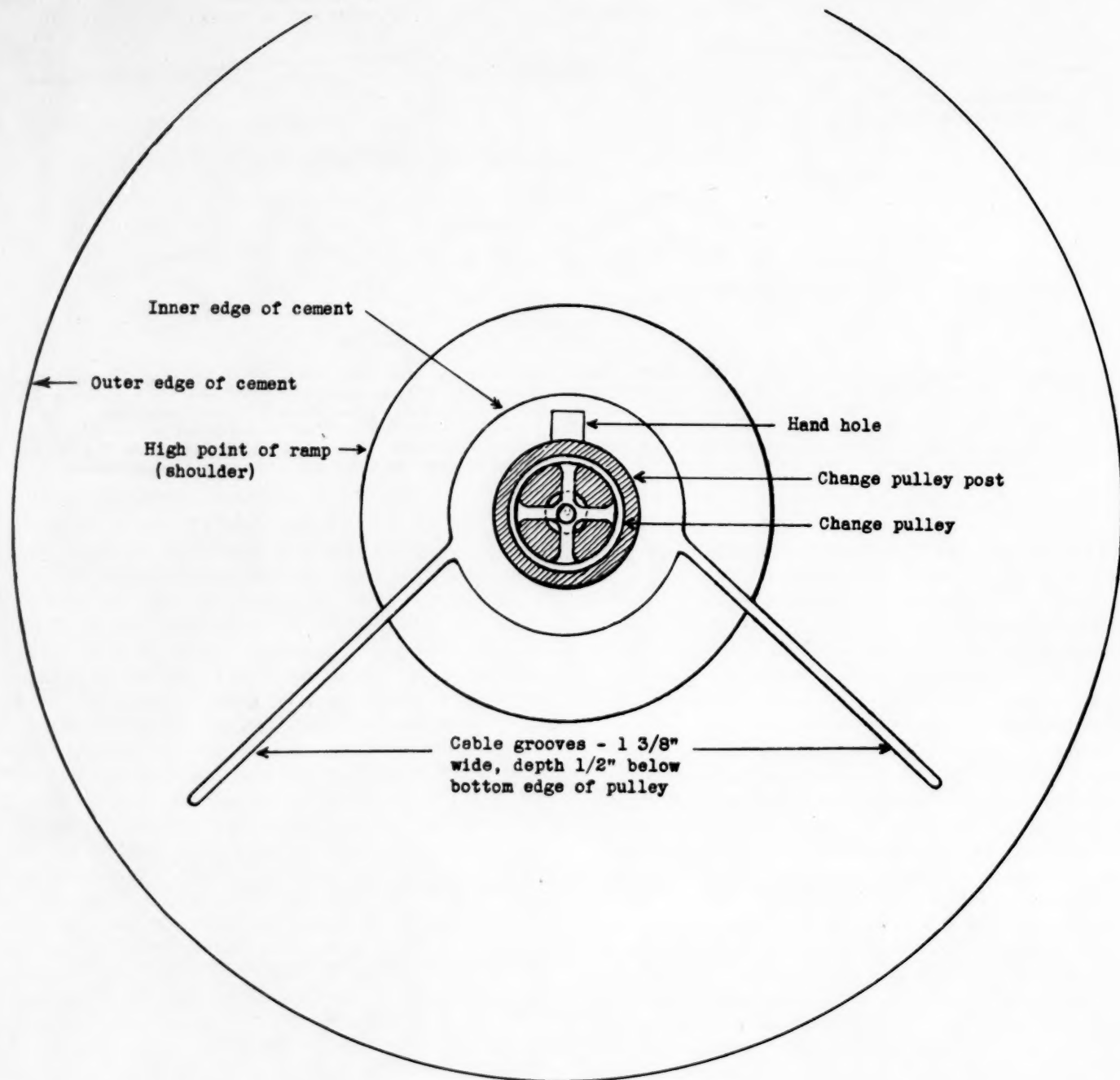
This miniature range is constructed on an approximate ratio of one (1) to three (3); from the firing line to the extreme end of the range is 1,000 feet, using 1,000 yards as the extreme range. The targets are constructed on a 1:3 ratio to the object they represent. They are mounted on a cart which runs on a flanged wood track. Movement is imparted to the cart by a hand winch. A one-quarter ($\frac{1}{4}$) inch line is fastened to one end of the

cart, run over the winch drum, back under the cart to the farther end of the track, where it is passed over a sheave, or pulley, returned to the other end of the cart and secured. This gives an endless chain (line) permitting the cart to be moved away from or towards the winch. The winch moves the cart about five (5) feet for each complete turn of the drum. The winch is placed behind a protective wall, of sufficient thickness, height and length to protect the operating crew of two (2) men. A telephone is placed at the winch and connected to the firing line. The number of tracks is optional, as is the direction in which they run. Where two (2) tracks meet, one goes under, the other over. Sufficient space is left between the top of the lower track and the bottom of the upper track so that the target running on the lower track will clear the upper track. Indicators are placed on the line to show when to stop the cart at either end of the track. Brush, simulated trees and hills are placed in front of the tracks, (between track and firing line), to make the targets disappear etc. One (1) man operates the winch while the other mans the phone. Control of the targets is maintained by telephone from the firing line.

Although the above description is for .22 caliber work, there is no reason why a reduced or full scale similar range can not be constructed for the use of larger caliber guns. It would be necessary to protect the track, perhaps by running it in a trench, and to run it in directions that would avoid enfilade fire; reversible power plants would be necessary to move the carts. The cost of such a range would be small in comparison to the valuable means of training it would make available.

The .22 caliber rifle makes an ever ready means for a sub-caliber mount on all guns adaptable to this work. It has been successfully mounted and used by the Anti-Tank Platoon, Sixth Marines, on the .50 caliber, ground, AT MG, and on the 37mm M-1916. (See June, 1941,

FIGURE 5.—TOP VIEW OF CHANGE PULLEY AND GROOVED RAMP



copy of *The Leatherneck* for mount on new 37mm AT gun). In each case the sub-caliber was fired by pressing the trigger of the gun mentioned and the sights of the training gun were used.

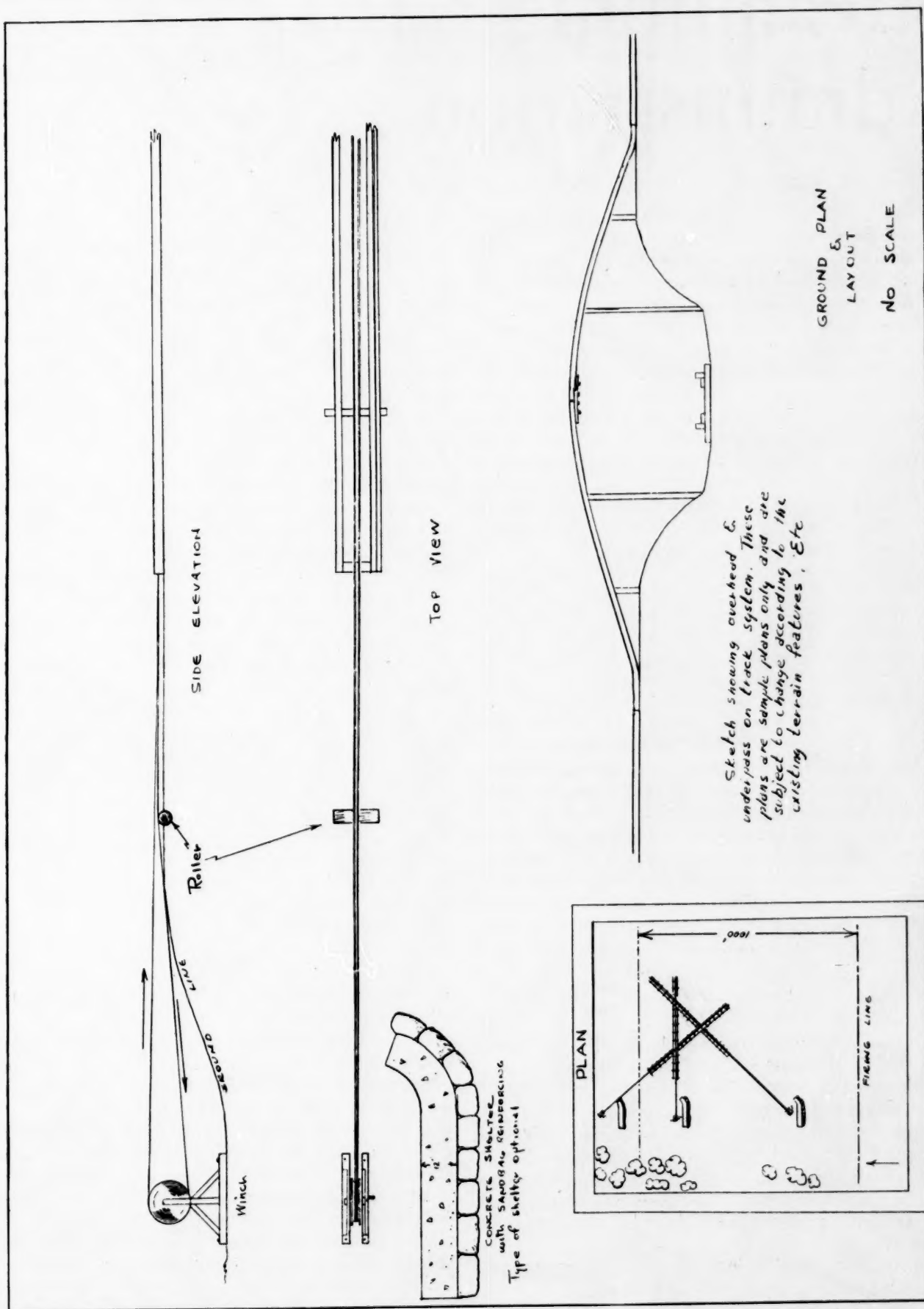
The .22 caliber cartridge when fired from a rifle in good condition will consistently place in a 6-7 inch group at 1,000 feet, with correspondingly smaller groups at shorter ranges.

In conclusion, it is believed that this miniature range can be used in many different ways and phases of training. Any type of figure or object may be mounted on the carts, and the carts can run through any kind of

simulated terrain, woods, plains, brush or mountains.

And last it will stimulate interest in training. Give a man something live and real to shoot at and he will try harder and get better results than when shooting at a dull target. And competition between squad leaders and crews will become keen and spirited when they have an opportunity to pit their ability against each other in work that is interesting, which will show how proficient they are in the use of their gun, and is not merely routine.

NOTE: The accompanying drawings and pictures show a simple means of construction—they may be used for actual construction or as a guide. Printer's, or lithographic ink, has been successfully used on the .22 caliber projectile to distinguish between guns.



Streamlining Administration

BY MAJOR ERNEST E. SHAUGHNESSEY, U.S.M.C.

THE division of general staff functions into four sections is generally conceded to be sound and logical. That these four sections naturally combine into two major groups is not always so apparent. The Two and Three sections constitute the tactical group while the One and Four sections are the administrative group.

Junior officers are required to devote most of their time to tactical studies and are often inclined to rely on senior non-commissioned officers for advice on administrative details. The recent rapid expansion of the Marine Corps has caused the promotion of many non-commissioned officers to administrative duties on the strength of their records and abilities in field duties. As a result they have found it difficult to keep up with the complicated technical details of supply and administration.

I believe that a few major changes in our system would relieve the lower echelons of a great volume of paper work, would increase the general efficiency of the corps, and would better utilize the abilities of our older and more experienced enlisted men on staff duty.

These proposed changes will be taken up in detail as effecting lower units.

THE FOUR SECTION

Accountability for buildings, permanent installations, etc., is not within the province of unit commanders and will not be discussed here.

The issue of food to messes is a direct transaction between the commissary officer and mess officers. The present system is adequate.

All property with which a unit commander is concerned could be issued under four classifications:

1. Post property.
2. Organization property.
3. Allowance property.
4. Clothing.

All types of property under each classification would be handled in the same manner by the unit commander, even though the accountable officer may use different classifications in his returns.

Before discussing the above classifications in detail I recommend that one present group be eliminated, that is individual equipment. Rifles, bayonets and holsters would be classed as organization property and the other items as clothing. Form NMC 782 QM would thus be eliminated.

Property responsibility between unit commanders and accountable officers would work as follows:

1. *Post Property.* This would consist of such items as office furniture, barracks equipment, etc., furnished for

use at a particular station. It would also include items of office, shop, or mess equipment issued in addition to similar items of organization property, where such items would not be carried by the unit on change of station or on departing for field duty. Post property would be receipted for by the unit (Company) commander to the accountable officer of the post or station. It would never appear on the accounts of the unit accountable officer.

2. *Organization Property.* This would consist of all weapons, vehicles, instruments, camp and mess equipment that will be moved with the unit. It includes all property to be moved except allowance property and clothing. Quantities shown in tables of allowances should be considered a minimum requirement for periods of limited field duty. Unit commanders would receipt for this property to the unit accountable officer, normally the Regimental or Division Quartermaster.

The major change in this group is the addition of rifles, bayonets, etc., to organization property. To effect this change all such items now on charge as individual equipment would be taken up by the accountable officer and issued to units on the basis of 110% of the number specified in tables of organization. Rifles would not be transferred with men on change of unit. This would make more economic use of the limited supply of 1903 rifles available. No rifles of this model would be required for units armed with the M-1 rifle, and fewer would be held in storerooms of machine gun, artillery, and tank units. Care and inspection would be more uniform where a unit commander knew he would keep the same weapons regardless of changes in personnel. The advantages of having a man keep the same rifle throughout his services are somewhat modified by the fact that a transition to the M-1 rifle can best be made by unit, and also because many combat units are now armed with other weapons.

3. *Allowance Property.* This would include stationery, cleaning gear, spare parts, special clothing, tools, and all items now listed as expendable. The method of supply would be to establish a level to be maintained for each item and initially issue up to this level. Replacements would be made by assigning a quarterly money-value allowance for each unit and allowing the unit commander to draw supplies within this allowance. Savings could accumulate for the fiscal year.

Unit commanders should be given considerable latitude in the expenditure of this allowance. While it may be expedient to establish limits on some items, the bulk of the allowance should be a general fund in order that

(Continued on page 53)

A Simple Aptitude Examination

BY MAJOR JOHN S. LETCHER, U.S.M.C.

IN all organizations there are certain duties the proper performance of which requires the assignment to these duties of personnel possessing a high degree of mental quickness. In an artillery organization for example, gunners, recorders, and computers at the Battalion Fire Direction Center, must be able to make various arithmetic computations rapidly and accurately. The selection of men to perform these duties is frequently made on a trial and error basis. Numerous men are tried and often considerable time is spent trying different men before satisfactory ones are found.

In September, 1941, fifty recruits joined a 75mm gun battalion from the Recruit Depot at San Diego. It was decided to give them a simple aptitude examination, which is set forth at the end of this article, as an experiment with two purposes in view. The first was to try to determine their degree of mental quickness so that they could be assigned to duties best suited to their capabilities and the second was to assure an even distribution among all batteries of men based on their mental quickness.

When the recruits arrived at the barracks they stacked arms, put their sea-bags and overcoats in a pile and were marched to the messhall where the examination was given them. Tables had been cleared and a place made for each of the fifty men with a copy of the examination, scratch paper, and a pencil ready. They were given thirty minutes to work on the examination. If they finished in less than thirty minutes they turned their paper in and the officer in charge noted how many minutes they had worked on it.

When the thirty minutes had elapsed all examination papers were collected and delivered to three officers who marked them. They were graded on a basis of ten, a grade of one for each problem answered correctly. No credit was given unless the answer was exactly right. Where a problem required more than one answer each answer was graded as a proportionate part of one.

An examination could be graded and marked in from one to two minutes so the three officers grading the papers completed them in from twenty to thirty minutes. The recruits were listed according to the grades which they made. If two made the same grade then the one who completed the examination in the shortest time was placed highest on the list.

The assignment of men to batteries was made by assigning them in the following manner to assure an even distribution. The first man on the list went to "G" battery, the second to "H" battery and the third to "I"

battery. Then reversing the procedure the fourth went to "I" battery, the fifth to "H," and the sixth to "G." Then the seventh to "G," the eighth to "H" and the ninth to "I" and then the procedure was again reversed and the distribution continued in this manner until all men were assigned to the batteries.

The battery commanders were present when the distribution was made and received the grades made by each man assigned to their batteries. The battery commanders used these grades to select men for duties requiring special mental quickness and also to make an even distribution of men among the different sections of their batteries.

On the fourth of October and again on the fifteenth of October twenty-five recruits joined the battalion and the same examination was given to them. This made a total of exactly one hundred men who have been given the examination. It may be of interest to note that only five men made a grade of ten. The highest stand went to the one of these who completed the examination in nineteen minutes. He is a university graduate. One man in the hundred made a grade of zero. The average grade for the hundred men was five and one-sixth.

At the present date, 10 November, 1941, it is the opinion of the battery commanders that giving an aptitude examination to recruits when they join the battalion is well worthwhile, because it appears to accomplish both purposes for which it was designed to a greater degree than had been expected or hoped for when it was first tried. The recruits assigned to certain duties because of the grades made on the examination learned their duties quickly and are performing them in a highly satisfactory manner. In no case has a man who was assigned on the day he joined a battery to learn the duties of a recorder, or battery computer at the Fire Direction Center been changed to other duty because of his inability to learn or perform his duties in these assignments.

The examination which is copied here is not set forth as a model, but only as an example to illustrate this article. It was made up rather hurriedly as an experiment and it can doubtless be much improved upon.

APTITUDE EXAMINATION

This aptitude examination is given in order to help place men for certain duties in the batteries. Read problems carefully. Use scratch paper for computations and write your answers on the paper on which the prob-

(Continued on page 62)

They Had A Word for It

BY 2ND LIEUT. PATRICK LAUGHLIN, U.S.M.C.R.

WHILE its principles and needs are geared to the most modern military trends, it is a curious fact that the training schedule for prospective officers in the Candidate's Class at the Marine Barracks in Quantico, Virginia, was set down by a Roman writer named Vegetius during the reign of the Emperor Valentinian more than a thousand years ago.

This is not to say that there have been no changes or that those in charge of the Candidate's training have displayed any lack of forethought and originality. It is simply that the fundamentals governing the selection and training of recruits have not considerably changed in the past thousand years. Notwithstanding sweeping changes in weapons, equipment, speed and mobility of armies, these fundamentals remain what they were. The chance that the future will see any great change in them is slim indeed.

Vegetius' book, "De Re Militarii," literally, "Concerning the Military Art," was the most important military work produced from Roman times till the 19th century. It was written by a man of little or no personal military experience and was drawn from such sources as the writings of Cato the Elder, Cornelius Celsus, Paternus, Trontinus and the regulations and ordinances of Augustus, Trajan and Hadrian. The author, in the preface, notes that it was his purpose to assemble into one volume the martial wisdom which in past ages had made the Roman legions invincible and Rome itself mistress of the world. The Empire, however, was too degenerate, too far gone for such a book to have its designed effect. The disciplined, sturdy legions of the Republic were gone, replaced by hired mercenaries who made a game of the Imperial purple and slowly brought about the disintegration of the Roman civilization.

It remained for soldiers of later days to appreciate and make full use of the information contained in Vegetius' book. Richard, Coeur de Lion, is said to have carried a copy with him on all his campaigns. The man who conquered the Turks at St. Gotthard, Montecuculli, wrote in his "Memoirs" that "There are spirits bold enough to believe themselves great captains as soon as they know how to handle a horse, carry a lance at charge in a tournament, or as soon as they have read the precepts of Vegetius."

Starting with first things first, Vegetius considers the selection of recruits. He notes, among other things, that men from the country are more likely to make good soldiers than those from the cities. While this conclusion was more true in those days than it would be now, when the gulf between the two is so much less, it has been true at the Candidate's Class that men with athletic ability more readily assimilate the principles of close order drill, just as Southern boys, born and bred to guns, have an easier time on the range than some others.

Vegetius believed that the sooner the recruits were caught, the better. He notes Puberty as their best time for entrance into the army, pointing out that at that time, "Instructions of every kind are more rapidly imbibed and more lastingly imprinted on the mind." In addition, "the indispensable military exercises of running and leaping must be acquired before the limbs are too stiffened by age."

While he confesses that the ancient Romans preferred big men for their legions, Vegetius sadly reports that in his time, when so many young Romans prefer civil service jobs to the army, courage and strength are more desirable qualities than size alone. The young soldier, he says, "ought to have a lively eye, should carry his head erect, his chest should be broad, his shoulders muscular and brawny, his fingers long, his arms strong, his waist small, his shape easy, his legs and feet rather nervous than fleshy. When all these marks are found in a recruit, a little height may be dispensed with, since it is of much more importance that a soldier should be strong than tall." Without going into details of height, weight, eyes, and the like, this set of qualifications bears strong resemblance to those set up by the Bureau of Medicine and Surgery for entrance into the Candidate's Class. Can't you hear the corps-men in some Illyrian recruiting station saying, "Extende linguam," or "Respire alte?"*

After their selection, recruits in Roman times began their acquaintance with close order drill, just as do present day Candidates for Commission. Drill instructors must have been as important then as they are today, for Vegetius notes, under "Initial Training," that "The first thing soldiers are to be taught is the military step, which can only be acquired by constant practice of marching quick and together. Nor is anything of more consequence either on the march or in the line than that they should keep their ranks with the greatest exactness." Drifting down the centuries one can hear the cry of anguished drill sergeants calling a snappy "Unus, duo, tres, quattuor," or the familiar heavily sarcastic, "Alium Sinistrum, Tarde."†

That the lads were no slouches at marching who could have given the famous German parachutists a run for their money is proven by the stipulation that "They should march with the common military step twenty miles in five summer hours, and, with the full step, which is quicker, twenty-four miles in the same number of hours." This was with the heavy marching order of that day—sixty pounds—in addition to their arms. Vegetius tells us "Recruits in particular should be obliged frequently to carry a weight of not less than sixty pounds and to march with it in ranks." So the hikes at Quantico,

*Stick out your tongue and Breathe deeply.

†Other left, stupid.

out along Stadium Trail to the Combat Area and back again by way of Fuller Road are not without age-sanctioned precedent.

The Candidates who make their harried way down the bayonet course under the eyes of critical instructors can feel for the Roman recruits who soon after their induction into the service were set to the exercises of the Post and the Sword. The Post exercise was valuable, notes Vegetius in that "No man, either soldier or gladiator, ever distinguished himself in the circus or on the field of battle who was not perfect in this kind of exercise." With that warning in mind, "Every soldier, therefore, fixed a post firmly in the ground, about the height of six feet. Against this, as against a real enemy, the recruit was exercised with round bucklers woven with willows, twice as heavy as those used on real service, and wooden swords double the weight of the common ones." It was Roman military doctrine that thrusting was to be preferred to cutting with the sword, and they "Not only made a jest of those who fought with the edge of that weapon, but always found them an easy conquest." Today's Candidates would feel perfectly at home on the Field of Mars listening to the instructors oft-repeated and so seldom heeded, "Tene gladium inter te et tuum inimicum."‡

Roman range work, of course, was confined to the bow and arrow and for this weapon, Vegetius proposes "A third or fourth of the youngest and fittest soldiers should also be exercised at the post with bows and arrows made for that purpose only. The masters for this branch must be chosen with care and must apply themselves diligently to hold the bow in the proper position, to bend it with strength, to keep the left hand steady, to draw the right with skill, to direct both the attention and the eye to the object, and to take their aim with certainty. This is not to be acquired without great application." Barring certain technical differences, these might well be the instructions the Candidates get on the rifle range to "Hold your breath and squeeze them off."

Hills and dales around Quantico are pocked with the fox-holes and skirmishers trenches dug by successive classes of Candidates. So too, plains and valleys of all Europe were spotted with Roman field fortifications—their palisaded camps. According to our preceptor, "Recruits are to be instructed in the manner of entrenching camps, there being no part of discipline so necessary and useful as this." Erecting a camp, even of the most temporary nature, was a long business in those days of spears, chariots and catapults. "When the danger is not imminent, they carry a slight ditch around the whole circuit, only nine feet broad and seven deep." This is our old friend speaking again. "With the turf taken from this they make a kind of wall or breastwork three feet high on the inner side of the ditch." When danger was not imminent the task was thus far from simple. On the other hand, "Where there is reason to be apprehensive of attempts of the enemy, the camp must be surrounded with a regular ditch twelve feet broad and nine feet deep perpendicular from the surface of the ground."

Candidates can mentally compare the amount of work

‡Keep the point between you and your opponent.



Acme Photo

TO SERVE WITH MARINES

Philadelphia, Pa.—The first class to complete regular Marine Officers' Course in four and a half months is graduated at Marine Barracks in the Navy Yard, February 2, 1942. The 95 Second Lieutenants finishing their studies in half the former time, will now be assigned to active duty.

required to dig one trench, skirmishers, and that involved in the construction of a ditch and palisade around an area big enough to hold a thousand men. The comparison should be encouraging and should give them one more reason to be glad they are concerned with A. Hitler and not that worthy's big, blond Germanic predecessor, Ariovistus.

With the Romans, field fortifications and Saturday morning inspections were in a sense combined, whence the statement that such work was important to discipline. "The centuries (units of a hundred men) are employed by turns in this work. It is then inspected and measured by the centurions, who punish such as have been indolent or negligent. This is a very important point in the discipline of young soldiers."

Throughout his work, Vegetius insists on the need for and ultimate battle value of discipline—a thought that was lost during the Middle Ages but which has been revived in our time and is more important and necessary today than ever before in the history of warfare. The three and a half month training period specified for the Candidates for Commission compares with the four month session advised by Vegetius for the instruction of recruits in discipline and the fundamentals of military.

With these parallels before us, is it too much to say

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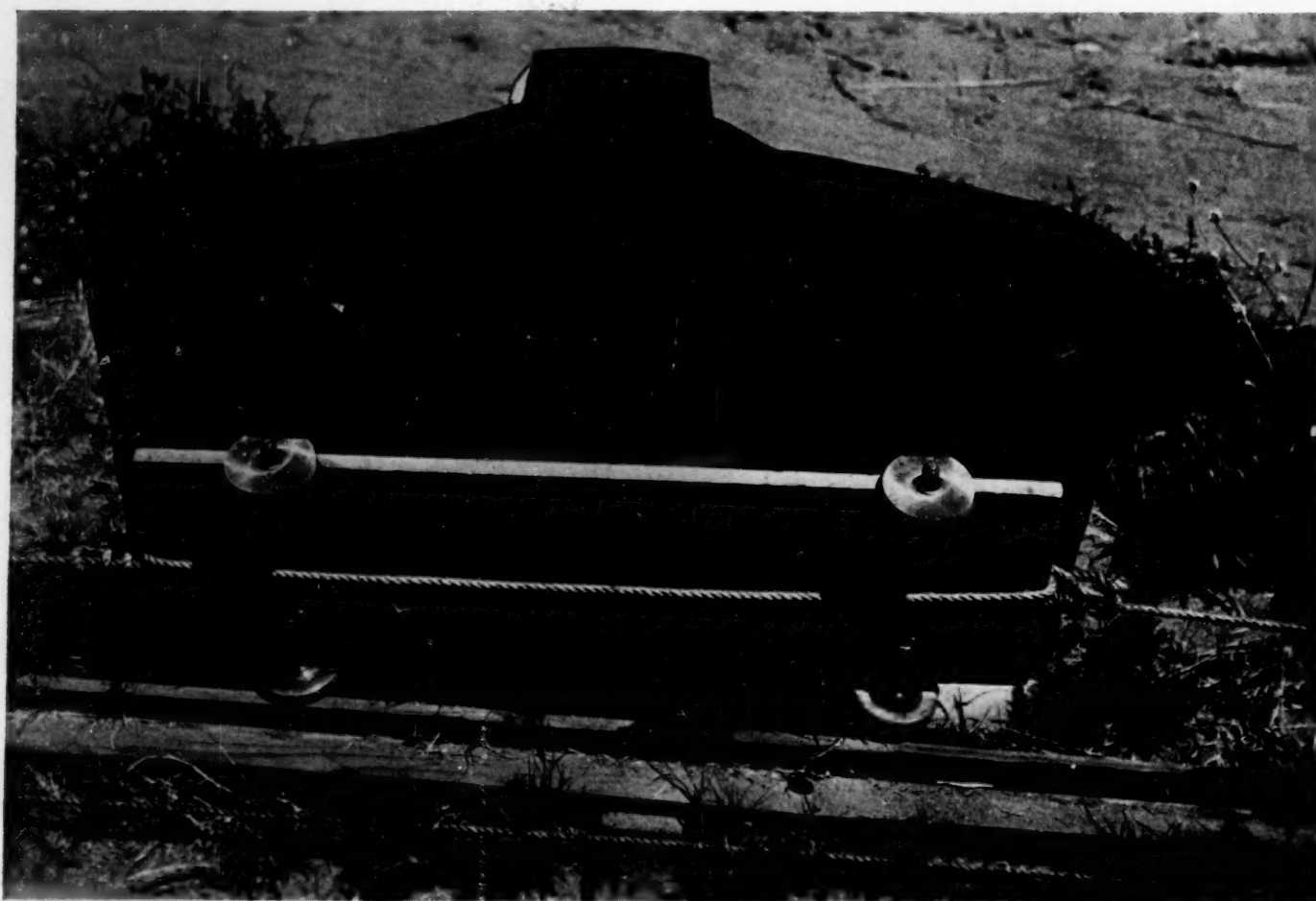


Figure 1

Moving Target Range Fixtures

BY MARINE GUNNER JOHN A. BURNS, U.S.M.C.

THE following article on the construction of certain fixtures on M range (moving target) at Camp Elliott, San Diego County, California, is submitted with the thought that some of the fixtures described may be of value to others in the construction of a similar range, or to improve ranges already in use.

It fell to the lot of the Anti-Tank Platoon, Sixth Marines, to build the first moving target range at Camp Elliott. The range constructed was satisfactory and the first moving target training at Camp Elliott was completed without undue trouble.

With the expansion of Camp Elliott it became necessary to change the location of this range. Marine Gun-

ner Brown, who was Officer in Charge when the original range was constructed, had been relieved by the writer some months earlier.

The original range was used once more, but considerable difficulty was experienced with the change pulleys and the machine used to tow the target. Thought was given to the elimination of these difficulties, and the change pulleys and towing machine described below were developed. It is not claimed that the fixtures described will eliminate all trouble, but it is believed that they will give very satisfactory results if installed correctly, and one man, with some mechanical ability, assigned to operate the power unit and be made responsible for the care and maintenance of the range.

TOWING MACHINE

First we will take up the towing machine. (Figure 1.) It is made of an old surveyed truck or automobile, stripping everything from the frame except the motor, clutch and transmission, and the speedometer if it is connected to the transmission. Of course the instrument panel remains, as does the radiator and similar necessary items.

CABLE REEL

The cable drum is made of six (6) inch steel pipe. A cold rolled steel shaft about one (1) inch in diameter, is welded through its center, with a bearing extension on each end, one end being left long enough to extend through the bearing and connect to the drive shaft. A circular steel plate, about one-fourth ($\frac{1}{4}$) inch thick and twenty-eight (28) inches in diameter, is welded to each end of the pipe, at right angles. This completes the reel. It is secured in place on two (2) cross members, which are bolted or welded to the truck frame, and on these the reel bearings are bolted. If the axis alignment of the reel shaft and transmission is perfect, no universal joints are necessary in completing the drive connection. However, their use is recommended.

CABLE THREADER

The cable guide lever and guide rod are made of three-quarter ($\frac{3}{4}$) inch pipe, welded where screwed into elbows to make the unit rigid. The cable guide is made of a

one-half ($\frac{1}{2}$) inch round steel rod, welded at its lower end to the cable guide rod. The guide is about three (3) inches wide and high enough to extend above the reel flanges. The upper ends are not fastened together, but overlap, with their spring tension holding them together, so that the towing cable can be placed in the guide and not jump out when being reeled in or out. The pipe connecting the cable guide lever and the cable guide rod, runs underneath the truck frame and is secured to the floor, underneath the center of the reel, so that the cable guide may be moved from one end of the cable drum to the other, threading the cable evenly when it is reeled in. The cable guide rod works against the truck frame on the outside (right) and the cable guide lever comes up on the left of the frame. The cable threader is balanced as nearly as possible.

BRAKE

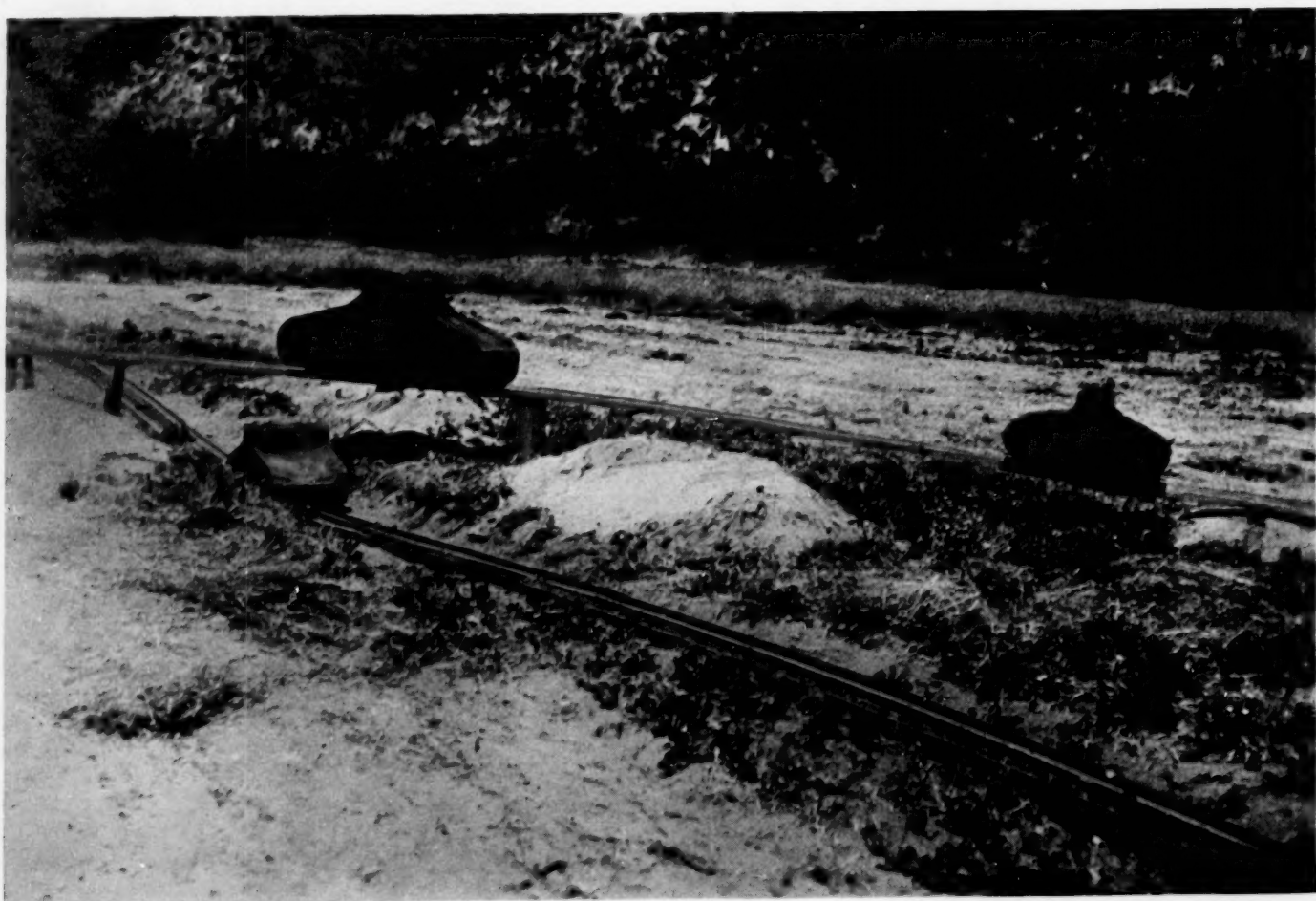
The brake assembly is made of three-quarter ($\frac{3}{4}$) inch pipe and is pivoted on the inner cross member. A rectangular iron plate is welded on the brake end of the assembly and regular brake lining is attached to this plate. It works against the outside surface of the inner reel flange.

All other parts as shown on Figure 1 are self explanatory.

The complete unit is bolted to four (4) concrete posts. These posts are about ten (10) inches square at the top and sixteen (16) inches high, and form part of the ce-



Figure 2



ment floor. A suitable building houses the unit for its protection and security.

It will be noted that all control levers, etc., are close together and on the left side of the machine. This makes one (1) man operation easy and permits the operator to watch the target at all times.

CHANGE PULLEY

The change pulley unit is made of a sheave, axle and post. The eight (8) inch sheave takes a three-quarter ($\frac{3}{4}$) inch cable or less, has a seven-eighths ($\frac{7}{8}$) inch cold rolled steel axle. The axle has an iron plate, about six (6) inches in diameter and one-quarter ($\frac{1}{4}$) inch thick, welded on its upper end, leaving sufficient space for the sheave to be secured as shown in Figure 2. From the plate to the lower end of the axle is eleven (11) inches. A regular iron washer is placed between the sheave and the welded plate and between the sheave and the hexagonal dome nut. The nut is locked by a soft pin passed through the nut and axle, and burred on each side to prevent its coming out, but so that it can be knocked out if necessary. The post is about twelve (12) or fourteen (14) inches in diameter and four (4) feet long. A seven-eighths ($\frac{7}{8}$) inch hole is bored in the center of one end of the post for a depth of eleven (11) inches. A hand hole is cut in the side of the post about five (5) inches wide and four (4) inches high. The top of this cut is ten (10) inches from the top of the post, and it is cut deep enough to permit easy tightening of the nut on the lower end of the axle.

The unit is assembled as shown in Figure 2. The axle fits snugly in the post and the lower tightening nut is drawn up hard to prevent any movement of the axle in its seat.

SETTING CHANGE PULLEY

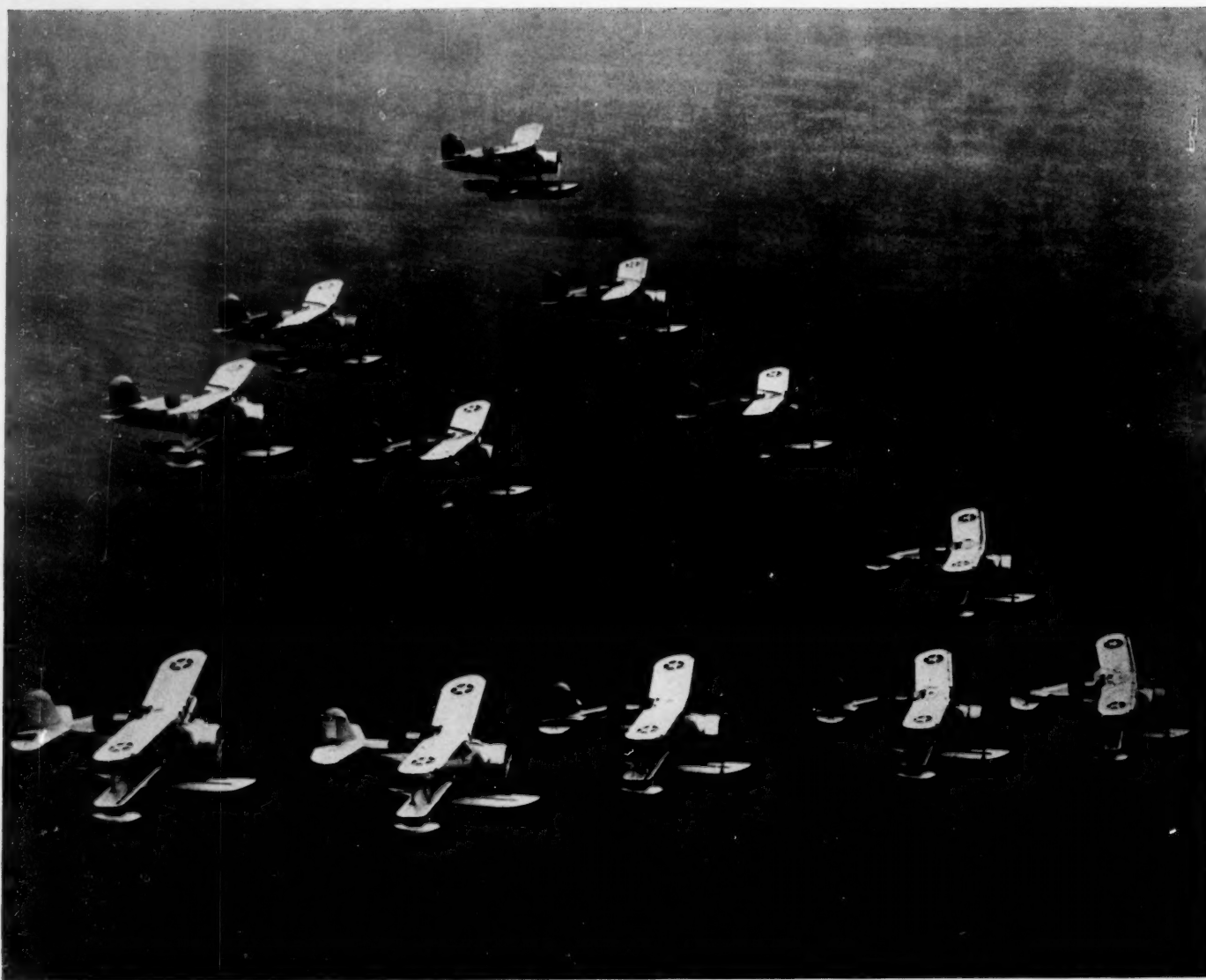
The change pulley is set in the ground as shown in Figure 3. The upper side of the sheave is about two (2) or three (3) inches below the ground level. The earth is scooped out around the top of the post, saucer shaped, for a diameter of around thirty-eight (38) inches. The filling is tamped firmly when setting the post to prevent it from moving—the hand hole is filled with burlap or paper before the post is set. The axle hole, axle and tightening nut, are well greased before assembly to prevent rust, and to make disassembly easy if necessary.

OPERATION

If the location of the towing machine is such that the cable runs on or off the reel drum at right angles no means of establishing this run is necessary. However, if the cable runs at an angle to the reel drum some means to guide it in at right angles must be provided, as the cable threader is simply to thread the cable evenly on the reel. Two (2) posts set in the ground about fifty (50) yards from the towing machine and at right angles to the reel drum, may be used for this purpose. They should be of two (2) inch pipe, or similar material set about six (6) inches apart parallel to the machine, and

(Continued on page 60)





Scout Observation VCS-6 Planes

Official U. S. Navy Photograph

Neither Fish Nor Fowl

BY 2ND LIEUT. RICHARD E. FLEMING, U.S.M.C.R.

IN this day of smashed precedent and outmoded tradition, certain established customs and ideas seem to hang on to the impediment of needed progress in many branches of our services. All of our services needed the rude example of Panzer and Luftwaffe efficiency to awaken them to the fact that this is an era of military **Specialists** whose one and only job is to increase the efficiency and precision of their efforts in a single field, however comprehensive that field may be.

The Marine Corps, the old, versatile, "Can Do" service which has performed so many tasks under so many difficulties with efficiency and despatch, has been slow to recognize the fact that to maintain its ability to keep

most situations well in hand, it must have personnel who are not mere jack-of-all-trades in the field or on the sea, but **experts** in the particular problem to be handled. This is just now being recognized, and steps are being taken to the solution of it, but one major fact is overlooked.

In Marine Aviation the officers are constantly reminded that they are ground officers first—and aviators second. Since the predominant idea is that of being ground officers first, the specialized business of developing efficient aviation suffers.

The avowed purpose of Marine Aviation is "to support the Fleet Marine Force in landing operations, and

to support other troop activities in the field. Secondly, Marine Corps Aviation serves as replacement squadrons for Naval carrier based aircraft,"—a highly comprehensive and difficult task, the practice and performance of which requires all the efforts of its personnel; yet it is insisted that aviation personnel be so qualified in the field and attend to so large a number of extraneous ground jobs that aviation is too often subordinated.

The attendant duties in aviation are myriad. In addition to their flight and maintenance duties, the officers take regular turn as squadron duty officers, tower duty officers (traffic control), standby sections of three or more planes ready for immediate take-off, coding board officers, and staff duty officers, all of which are twenty-four hour duties requiring the presence of the officer on the base. These are special aviation functions being rightly carried on by flying personnel, but added to these are the innumerable administrative duties and ever recurring guards and drills.

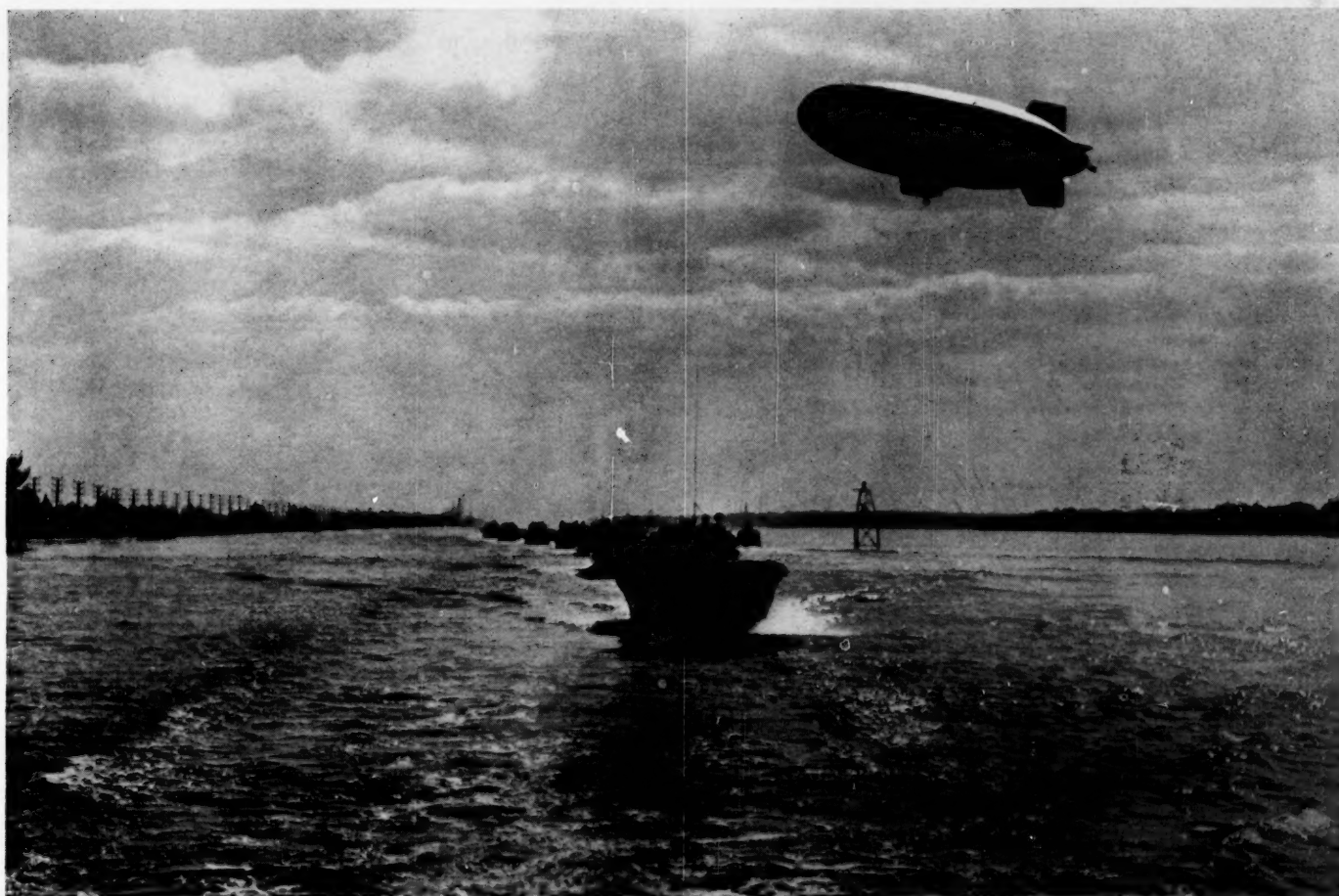
All of these latter duties keep the pilots too frequently from their prime function. Officers connected with the Post Exchange or with courts-martial or councils on various matters, frequently lose days at a time. Those on the guard lose at least a day and a half and frequently more. As a result of this frequent fluctuation of pilots and men available for duty, schedules must be juggled, substitutions made in both flight and maintenance

sections, and the whole objective suffers a not inconsiderable amount.

Intelligence reports from both the Allies and Axis powers indicate that their air forces are concerned only with the problem at hand—aviation. Ground duties are performed by ground officers and troops especially attached for that purpose. Even airdrome defense is carried on by special anti-aircraft and searchlight units distinct from the aviation personnel, and the obvious result is increased efficiency each in its own sphere. Our own Army has long ago recognized this as necessary.

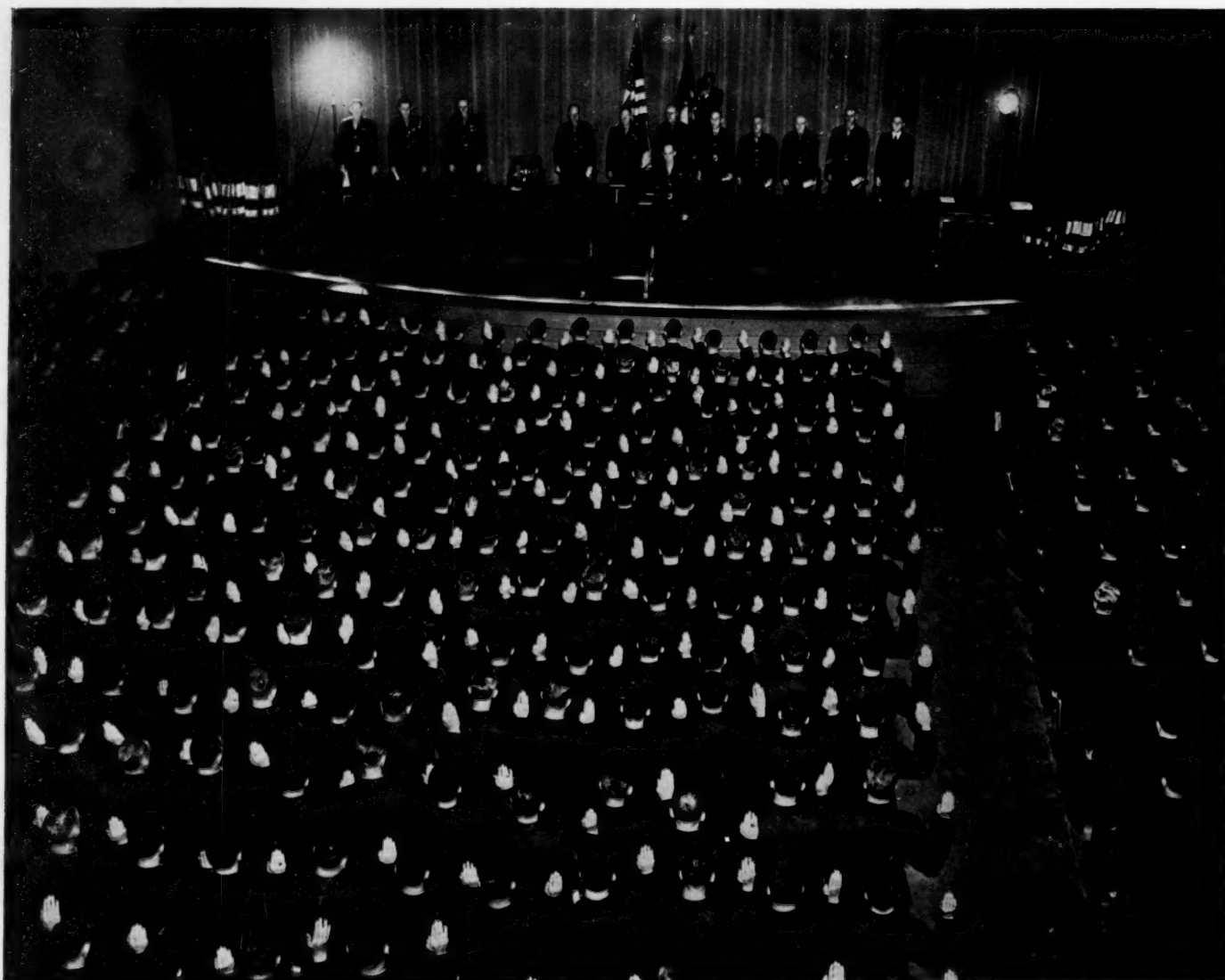
All of the duties referring strictly to aviation naturally must be carried on by qualified personnel. A squadron is, in fact, a dual organization handling all the morning reports, muster rolls, pay accounts, ration tabulations and similar reports of a ground company in addition to its voluminous aviation records. Such data as engine logs covering every hour the engine is run, flight records covering names, dates, types of flights and hours in the air of every person leaving the ground for whatever purpose, performance data on all machinery, gunnery and ordnance records of great detail, communication and radio data, technical orders and notes from the Bureau, and all other strictly aviation records must be kept up to the minute. And it holds true in aviation as in any other work, that the mere records are but a small

(Continued on page 59)



Motor Torpedo Boats and Blimp

Official U. S. Navy Photograph



MARINE SCHOOL GRADUATES NEW CLASS

Acme Photo

Quantico, Va.—Members of the Marine Corps take their oaths as Second Lieutenants from Colonel Lemuel C. Shepherd, Jr., on their graduation from a special course in the theory and practice of war at the Marine Base. A class of 225 was commissioned.

ICELAND BASE COMMAND
REYKJAVIK, ICELAND
Office of the Commanding General
6 November, 1941.

Brigadier General John Marston,
Commanding General, 1st Marine Brigade (Provisional),
Camp Lumley, Iceland.

Dear General Marston:

I wish to convey to you and to the officers and men of the First Marine Brigade (Provisional) the congratulations of your Army associates of the Iceland Base Command upon the occasion of the one hundred sixty-sixth "Birthday" of the United States Marines.

Your long record of ever-ready service to your country is familiar to us all, and we are proud, as are all Americans, to remember November tenth as the anniversary date of the Marines.

Many happy returns of the day!

(s) C. H. BONESTEEL,
Major General, Commanding
United States Army Forces in Iceland.

HEADQUARTERS,
FIRST MARINE BRIGADE (PROVISIONAL),
ICELAND BASE COMMAND.

7 November, 1941.

Dear General Bonesteel:

On behalf of the Marine Corps and the officers and men of the Brigade serving under my command, please permit me to convey to you our appreciation of your cordial letter of the 6th of November upon the occasion of the 166th anniversary of the founding of the United States Marine Corps.

I shall take great pleasure in having your letter read to all members of this command on the 10th of November and assure you that we have not only appreciated your thoughtfulness but look forward with great pleasure to continued service with the Army in the Iceland Base Command.

JOHN MARSTON,
Brigadier General, U. S. Marine Corps,
Commanding First Marine Brigade (Provisional).

Warrant Officers Promoted to Commissioned Rank

The Secretary of the Navy has approved the report of the Board convened December 22, 1941, to recommend warrant and chief warrant officers for temporary appointment to commissioned rank under the provisions of the Act of Congress approved July 24, 1941 (Public No. 188—77th Congress). The Board recommended the following:

FOR TEMPORARY APPOINTMENT TO CAPTAIN

General Duty:

Calvin Arthur Lloyd
Glenn Wright Black
Henry Pierson Crowe
William Andrew Lee

Artillery Duty:

George Frederick Haubensak
Lawrence Edwin Brown

Motor Transport Duty:

Robert Edwin McCook
Thomas William Paul Murphy

Aviation Duty:

Michael Wodarczyk
Albert Scherer Munsch
Ray Alfred Trevelyan
Millard Thomas Shephard

Quartermaster Duty:

August Frederick Schonefeld
Walter Ernest Yaecker
Edward Francis Connors

Willis Virdin Harris
Albert Orbon Woodrow
Roscoe Ellis
Alexander Nicholas Entringer
Clyde Thomas Smith
Homer Sterling
Louie Francis Shoemaker
James Cecil Puckett
Joseph Norris Milton Berger
Rupert Elbert Stone
Paul Guy Chandler

Duty, Adjutant and Inspector's Department:

Burns Daugherty Goodwin
Robert Michael O'Toole
Elmer Erich Barde

Paymaster Duty:

James Warren Norris
Judson Tyree Armstrong
Wilbur Wesley Raybolt
Delmar John Dee
Guy Bernhard Smith, Jr.
Fred John Klingenhagen
Edward Jerome Donnelly, Jr.
Allen Americus Zarracina

FOR TEMPORARY APPOINTMENT TO FIRST LIEUTENANT

General Duty:

Otto Leo Mietzel
John Alfred Burns

(Continued on page 58)



Acme Photo

JEEP COMING ASHORE

New River, N. C.—Jeep splashes shoreward from a Marine Landing Barge during Maneuvers of the Marine Amphibious Force. Sturdy little car tows a light field piece.

Almanac of the Marine Corps

(CONTINUED)

BY THE HISTORICAL SECTION, U.S.M.C.

April 30

1798: The Navy Department established by act of Congress. Prior to that time the Marines were under jurisdiction of the War Department. Benjamin Stoddert was the first to serve as Secretary of the Navy.

April 30

1919: The Marine Brigade remained with the Army of Occupation in Germany, with brigade headquarters at Nieder Bieber. The Rhine River Patrol, manned and commanded by Marines had been established. A feature at this time was the extended visit, inspection, and review of the Second Division and Marine Brigade by Secretary of the Navy Josephus Daniels. The Secretary stated, in part, as follows: "It was my privilege to spend several days with the army of occupation in Germany and to observe for myself the splendid bearing and efficiency of the celebrated Second Division commanded by General Lejeune, composed of Marines and men of the Army. Upon a review on the heights of Vallendar, overlooking the junction of the Rhine and Moselle Rivers, they bore themselves honorably as the victorious crusaders and defenders of right. Their record as preservers of order, dispensers of justice, and exemplars of Americanism won them as much reputation as their courage in battle. Charged with a difficult duty, living in the midst of a conquered people, they upheld the best traditions of American soldiers, and by their self-restraint and quiet efficiency showed that an army of occupation can enforce the decrees of its government without harshness or bitterness. * * * Soldiers and Marines alike refrained from any such acts as have so often in history brought a stain upon a victorious army of occupation."

May 1

1918: Five Marine officers were detached from the Fourth Brigade of Marines and ordered to the Third Division, Regular Army, which had just arrived in France. Major E. W. Sturdevant was assigned to the 3d Battalion of the 30th U. S. Infantry; Major R. L. Denig was assigned to command the 1st Battalion of the 30th U. S. Infantry; Major Robert E. Adams the 3d Battalion of 38th U. S. Infantry; Major Harry G. Bartlett the 2d Battalion, 7th U. S. Infantry; and Major L. W. T. Waller, Jr., the 8th Marine Gun Battalion, thus giving the Third Division a number of field officers of experience and training with the A. E. F.

May 1

1898: Battle of Manila Bay, in which the American squadron under command of Admiral Dewey destroyed the Spanish fleet. U. S. Marines on board the vessels took prominent part in this great naval victory.

May 1

1941: Marine Barracks, New River, North Carolina, established.

May 2

1927: The Sixth Regiment of Marines, under command of Colonel H. C. Snyder, together with 3d Brigade Headquarters and Service companies, a detached battery of artillery, and a Force aviation unit, arrived at Shanghai, China, on board U.S.S. "Henderson." Soon afterwards this force was augmented and the Third Brigade of Marines formed in China, with Brigadier General Smedley D. Butler, U.S.M.C., in command, which remained in China until the beginning of the year 1929. While the Brigade engaged in no actual fighting, the presence of the large force of Marines had salutary effect and assisted in improving our relations with the Chinese.

May 3

1898: Following the Battle of Manila Bay the Marines of the U.S.S. "Baltimore," under command of First Lieutenant Dion Williams, landed and took possession of the Spanish naval arsenal at Cavite, P. I. From that time to the present Marines have garrisoned the Cavite station.

May 3

1775: An old pay-roll of the Sloop "Enterprize," commanded by Captain John Prout Sloan, gives us the names of the first American Marine officer and enlisted men. The date of the roll is May 3, 1775. Lieutenant James Watson, the first American Marine officer, is shown as having entered the sloop on that date. Sergeant Josiah Sanburn and Privates Ichabod Hawley and Ichabod Parker enlisted May 3, 1775. The other 14 Marines whose names were shown on the pay-roll enlisted a few days later. This is the first document in which appears the word "Marine."

May 4

1927: Following the request of the Commander in Chief, Asiatic Squadron for more Marines in China because of increased danger to Americans in that country, a composite force, consisting of the 3d Battalion, 6th Regiment, the 2d Battalion Fourth Regiment; a battalion of the 10th Regiment; a light tank platoon; a company of engineers; and an aviation unit disembarked at Olongapo, P. I., on this date. The company of engineers and the light tank platoon soon proceeded to Shanghai via U.S.S. "Chaumont."

May 4

1811: Marines established a regular garrison on Cumberland Island, off the southeastern coast of Georgia, to

cooperate with the Army and Navy in operations leading to the annexation of East Florida.

May 4

1898: A temporary increase in the Corps of 24 officers and 1,640 enlisted men was authorized by Congress, for service in the war with Spain.

May 4

1921: The Signal Battalion was organized at Marine Barracks, Quantico, Va., composed of the 3d and 87th Companies of Marines.

May 5

1798: Daniel Carmick was appointed a lieutenant of Marines, and assigned to duty with the Marine Guard of the U.S.S. "Ganges," the first ship of the new navy to go to sea. After outstanding service both on land and sea, including the U.S.S. "Constitution," during which he attained the rank of major, Carmick was wounded in the Battle of New Orleans, and died soon thereafter.

May 5

1916: Because of revolutionary troubles in Santo Domingo City, D. R., two companies of Marines from U.S.S. "Prairie" landed at that place and protected the American Legation.

May 6

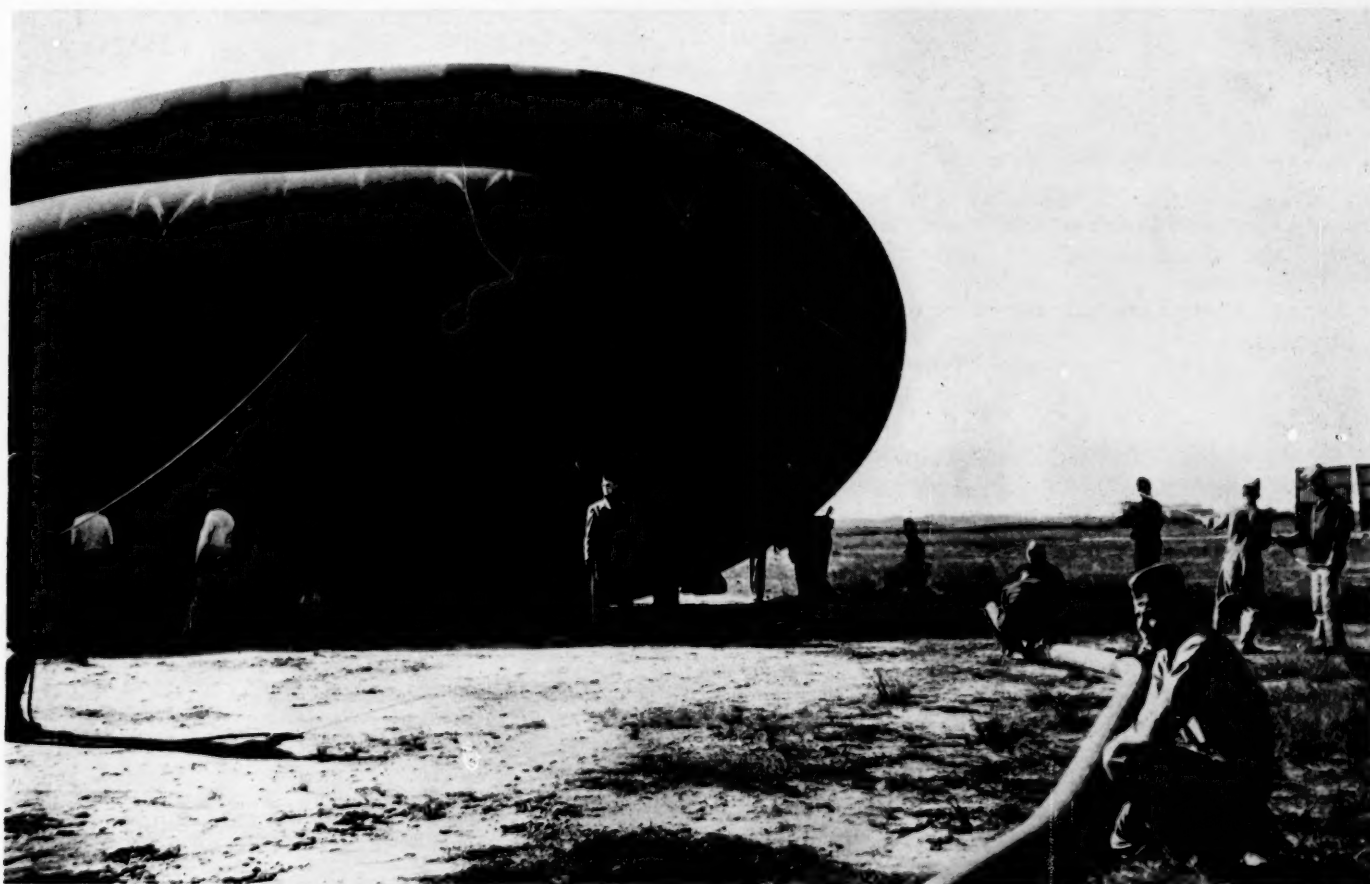
1914: Company of Marines under Captain A. E. Harding, from Port Royal, S. C., arrived at Puerto Plata, D. R., and prepared for landing because of danger to Americans following disturbances in that country. Conditions improved, however, upon the arrival of the Marines, and early in June the Company proceeded to Vera Cruz, Mexico, where a large force of Marines was required in connection with the occupation of that City.

May 6

1918: Brigadier General James G. Harbord, U. S. A., assumed command of the 4th Marine Brigade in France; he was in command of the Marine Brigade during the terrific fighting at Belleau Wood, in June, 1918.

May 6

1916: With chaotic conditions prevailing in the Dominican Republic as result of violent revolution during which the lives of Americans and other foreigners were in great danger, two companies of Marines from U.S.S. "Prairie" landed and protected the American Legation, while the Marine Detachment of U.S.S. "Castine" landed to guard the Haitian Legation. Naval forces also seized Fort San Geronimo. Several hundred rebels, armed and well supplied with ammunition, were holding Santo Domingo City. This marked the beginning of the American oc-



Acme Photo

MARINES TRAIN WITH BARRAGE BALLOONS

Barrage balloons are an essential part of any thorough-going defense against hostile bombers and every branch of Uncle Sam's armed forces must be prepared and equipped to operate the big life-saving "Fish." This operation is called topping-off. Helium is added to the balloon proper to provide lift.



Acme Photo

Here Marines get inside the Big Bag of one of the barrage balloons to make repairs. The webbing of cords fastened to the inside keep the balloon from bulging out of shape when inflated. The balloons are made of neoprene, one of the new coal tar water plastics which have replaced rubber for many uses.

cupation of Santo Domingo, which lasted approximately eight years.

May 7

1845: First Lieutenant A. H. Gillespie, U.S.M.C., who had been sent by President Polk with state messages to the American authorities in California, after making his way, disguised, through Mexico to California, finally contacted Captain John C. Fremont at Klamath Lake, near the Oregon boundary, after undergoing many hardships and eluding hostile Indians.

May 7

1926: Marines from U.S.S. "Cleveland" landed at Bluefields, Nicaragua, to protect American interests during a revolution. These were the first Marines to arrive for dealing with a situation that eventually required a brigade of Marines and six years of combat operations before peace was restored.

May 7

1798: Date of enlistment of the earliest Marine following the authorization of the new Navy. Stephen Bowden was his name.

May 8

1846: 500 Marines and a number of Bluejackets landed from the Gulf Squadron at Point Isabel (at mouth of the Brazos de Santiago), and guarded the large supplies left there by the Army, while the Battle of Palo Alto was raging. General Taylor, at Fort Polk, Texas, a few days later, wrote that "the reinforcement from the brig 'Lawrence' and the large force of Seamen and Marines so promptly furnished by the Squadron, requires a special acknowledgment to Commodore Conner. The Army is deeply grateful for the support and cooperation of a kindred branch of the public service."

May 9

1775: American soldiers, sailors and Marines succeeded in surprising and capturing an enemy schooner, which was renamed the "Liberty" and immediately converted into service as the first American war vessel of the Revolution.

May 9

1814: During the famous cruise of the "Essex" (commanded by Captain David Porter, U.S.N.), Lieutenant

John M. Gamble, U.S.M.C., and his small party of Marines and Sailors, while shifting supplies to the ship "Sir Andrew Hammond," were attacked by the natives on the island of Nukahiva in the Marquesas group. Gamble, despite a severe wound in the foot, received some days previously, finally drove back the savages with a few shots from the ship's guns.

May 10

1927: Marines perform many and diverse duties. On this date Brigadier General Logan Feland, U.S.M.C., appointed an arms commission of three Marine officers to look after all matters concerning the delivery of arms by both of the warring factions in Nicaragua. The payment of \$10.00 from Nicaraguan funds was authorized for each serviceable rifle or machine gun turned in. All arms when received were placed under guard of Marines. As soon as troops were disarmed, they were given protection by Marines until they dispersed to go home. Also all arms collected were convoyed into Managua by guards of Marines.

May 11

1800: Marines under Captain Daniel Carmick, together with Bluejackets cut out the privateer "Sandwich" in the harbor of Puerto Plata, Santo Domingo. Carmick and his party from the U.S.S. "Constitution," for this daring deed had boarded the sloop "Sally," which they disguised. Afterwards, Captain Carmick and Lieut. Amory with the Marines landed, captured the fort, and spiked the guns, before it could receive support. The party then rerigged the "Sandwich" for service against the enemy forces in the vicinity numbering about 500 men. This was during the naval war with France.

May 12

1775: Resolution of the General Court of Massachusetts "That the thanks of this Congress be given to the brave officers and men" who captured the British vessel "Margaretta" and two sloops at Machias, Me. The capture of the enemy vessel was effected by Jeremiah O'Brien and his thirty-five acting Marines armed with pitchforks, axes, and a few firearms. The British Marines who were killed in this fight, which has been termed the "Lexington of the Seas," were probably the first to fall in the war afloat. The "Margaretta" was repaired and later became the "Machias Liberty" of the Massachusetts Navy.

May 12

1927: Lieutenant Colonel R. Y. Rhea, U.S.M.C., took charge and began the reorganization of what remained of the old Guardia. The first enlistment in the new organization was made twelve days later. This was the third country in the Caribbean area since the turn of the century in which the U. S. Marines have formed, officered and trained native constabularies—the former occasions in Haiti and Santo Domingo.

May 13

1941: U. S. Marines were called out to restore order after a battle between International Settlement Police and pro-Japanese-Chinese police in which an American

and nine other persons were wounded. Order was soon restored.

May 13

1847: President James K. Polk wrote in his diary that Secretary of the Navy Gideon Welles and General Archibald Henderson (Commandant) of the Marines called. General Henderson personally informed President Polk "that six companies of Marines could be spared from the Navy for land service," in the war with Mexico. The President then gave written order to the Secretary of the Navy to transfer these Marines to the land forces under the command of General Scott, and added: "I requested General Henderson to execute the order without delay, as I deemed it important that General Scott's column should be reinforced by all our available forces with as little delay as possible."

May 14

1928: A combined Marine Corps and Guardia patrol, under command of Captain Robert S. Hunter, U.S.M.C., had contact with a force of about 75 bandits near the Bocaycito River, 15 miles north of Pena Blanca, in Nicaragua. In the fighting which lasted nearly an hour, Captain Hunter was fatally wounded, one Marine and one Guardia were killed, and one Marine wounded. Captain Hunter died four days later of the wounds received in action. Later awarded, posthumously, the Navy Cross, by the President of the United States for the Secretary of the Navy, with the following citation: "For extraordinary heroism in battle when on the occasion of an engagement with armed bandits in the vicinity of Pena Blanca, Nicaragua, 14 May, 1928, he carried a machine gun forward to a position from which to deliver an accurate and active fire on the enemy. Although receiving wounds at this time which later resulted in his death Captain Hunter continued in the fight to the last, displaying the type of grit, determination and courage which characterizes conduct above and beyond the call of duty."

May 14

1846: Congress declared war begun by Mexico, appropriated \$10,000,000 and empowered the President to use the armed forces of the Nation. The strength of the Marine Corps at the time was 63 officers, and 1,200 enlisted men.

May 14

1917: Site at Quantico, Virginia, occupied as Marine Training Base, when the first detachment of Marines arrived at Quantico from Annapolis, Md. The force consisted of four officers and 91 enlisted men under command of Major Chandler Campbell, U.S.M.C.

May 15

1846: A force of Marines and Bluejackets proceeded in small boats 17 miles up the Rio Grande, captured the town of Barita, thus opening the way for the advance of the Army to Matamoras. By the capture of this town, the Marines and Bluejackets became the first troops to invade Mexico, and the flag carried by them was the first American flag to be raised in Mexico during the war.



International News Photo

OLD GLORY FLIES OVER BERMUDA BASE SITE
Tucker's Island, Bermuda.—"Old Glory" rises into the Bermuda skies in historic ceremony on Tucker's Island as that Island and Morgan's Island are transferred to the United States for Air and Naval Bases.

May 15

1916: U. S. Marines and sailors, under the command of Admiral W. P. Caperton, occupied Santo Domingo City. This was the first landing on large scale during the intervention and occupation which lasted until August, 1924.

May 16

1927: At 2 a.m., this date, Captain Richard B. Buchanan, U.S.M.C., was killed in a battle between a company of Marines under his command and a band of revo-

lutionary guerrillas at La Paz Centro, Nicaragua. This was the first action of note of the Nicaraguan campaign, of several years' duration and which required the presence of a brigade of Marines as well as numerous ships' detachments. Private Jarvin Jackson, U.S.M.C., was also killed in the above-named action, and two marines slightly wounded.

May 17

1927: For the purposes of the occupation and to facilitate operations, western Nicaragua was divided into military districts, to which were assigned Marine Corps organizations, as follows:

District No. 1—1st Battalion, 5th Marines, Headquarters at Managua.

District No. 2—2nd Battalion, 5th Marines, Headquarters at Granada.

District No. 3—3rd Battalion, 5th Marines, Headquarters at Matagalpa.

District No. 4—1st Battalion, 11th Marines, Headquarters at Leon.

May 18

1846: Marines and bluejackets from U.S.S. "Cumberland" established post at Barita, on the Rio Grande, in connection with the combined army and naval operations in that vicinity in early part of the Mexican War.

May 18

1775: Following their capture of a British vessel on Lake Champlain on this date, Marines were present at St. Johns, Canada, when an American flag was carried ashore. Marines carried the American flag for its first visit to foreign soil, whether on this occasion, or when an American flag was carried ashore the following October at Prince Edward's Island, or when they carried the Grand Union Flag and hoisted it over the fort at New Providence, Bahamas, in March of the following year. American Marines served under every officer to whom has been attributed the title of "Father of the American Navy,"—whether John Manly, George Washington, John Paul Jones, Esek Hopkins, John Barry, or any other.

May 19

1918: The Fourth Brigade of Marines in France, finding the area around Vitry-le-Francois unsuitable for open warfare training, proceeded to a training area around Gisors, some miles northwest of Paris. The Brigade remained in this area for about ten days, where it engaged in open warfare exercises, battalion, regimental, and brigade maneuvers, prior to answering the call to help stop the onrush of the German army for Paris.

May 20

1906: A special Marine expeditionary battalion, under command of Major John A. Lejeune, was assembled at Philadelphia, Pa., and embarked on board U.S.S. "Columbia" for service in Panama. Revolutionary activities in Panama at this period necessitated the presence of large force of Marines in that country.

May 20

1928: Eighth Company of Marines opened the new Division of Matagalpa, Nicaragua, and took over police duties.

May 21

1847: In accordance with the wishes of President Polk, and of Secretary of the Navy Gideon Welles, a strong force of Marines was ordered for duty with General Scott's army in the march from Vera Cruz to Mexico City. The battalion of Marines under command of Major Samuel E. Watson, was the answer.

May 22

1912: The birthday of Marine Corps Aviation. The aviation muster roll for May, 1912, bore one name, that of First Lieutenant Alfred A. Cunningham, U.S.M.C.—who has been termed the "Early Bird of the Marines."

May 23

1912: Because of serious rebellion in Cuba, the First Provisional Regiment of Marines was mobilized in record time at Philadelphia, Pa., embarked on U.S.S. "Prairie," and sailed for Guantanamo Bay, Cuba, where it arrived a few days later. The extent of the rebellion later in the year made it necessary that Marine Corps units be stationed in various parts of Cuba for the protection of American lives and property.

May 23

1927: Soon after the beginning of the Nicaraguan campaign, Observation Squadron No. 4, Captain R. J. Archibald, U.S.M.C., commanding, arrived this date at Corinto, Nicaragua, from Quantico, Va. The arrival of this squadron via U.S.S. "Medusa," brought the total of aviation personnel to 14 commissioned pilots and five enlisted pilots, exclusive of mechanics and helpers.

May 24

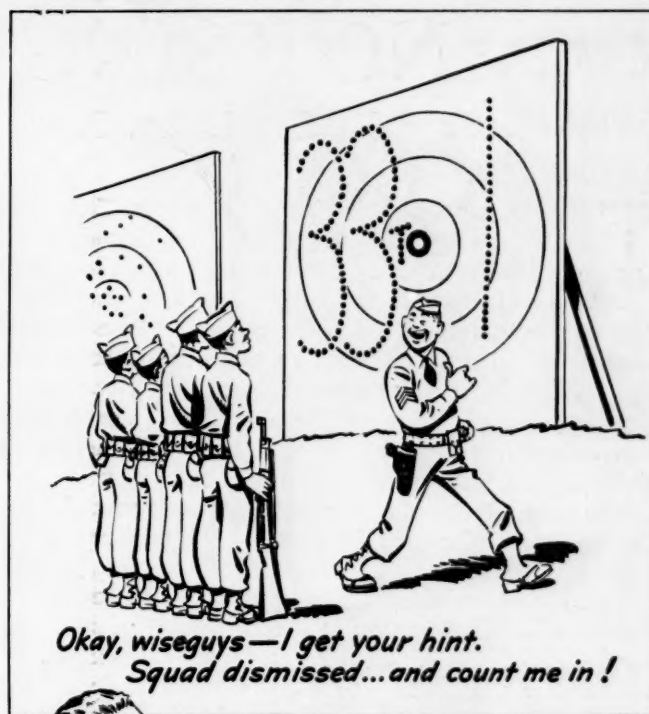
1927: Rifle Company of 11th Regiment, which had been stationed at Chinandega, moved to Somotillo, Nicaragua, to establish outposts at various places on the route to Somotillo. Daily patrols were maintained between important posts on this route.

May 24

1900: At the outbreak of the Boxer Rebellion in China, when the grave danger to the foreign legations at Peking was first apprehended, the Marine Guard of the U.S.S. "Oregon," composed of 28 enlisted men under command of Captain (now Major General, retired) John T. Myers, proceeded from Taku to Peking. This force was soon joined by a Marine detachment from the U.S.S. "Newark," commanded by Captain N. P. Hall, U.S.M.C. These Marines later formed part of the garrison at Peking which was besieged by a horde of fanatical Boxers, until relieved late in the summer of 1900 by the Peking Relief Expedition. The siege was marked by incessant fighting and gallant conduct on the part of the Marines.

May 25

1922: John J. Pershing, General of the Armies, visited the Marine Corps Base at Quantico, Virginia. General
(Continued on page 43)



"33 to 1"—

its flavor scores a hit with every branch of the service

Swell idea, Sergeant! And here's why you'll find so many others "at ease" with a sparkling glass of Pabst Blue Ribbon.

Like finest champagnes, Pabst Blue Ribbon reaches perfection through blending. Yes, 33 fine brews are blended into this one great beer. That's why every single drop has a distinctive mellow flavor all its own.

Next time at canteen or cafe, ask for Pabst Blue Ribbon in handy cans or in the dress parade bottle "with the blue ribbon on it."



NOT SINGLE HANDED

BY 2ND LIEUT. PATRICK LAUGHLIN, U.S.M.C.R.

THINGS were bad, that last six months of 1918. Once again victory had eluded Imperial Germany and now the Americans were pouring across three thousand miles of ocean to throw the weight of their fresh, well-fed troops into the balance against the German armies. With those armies food wasn't all that it could be. The replacements were of increasingly poor quality and there weren't enough of them. Cannon were worn out, ammunition was becoming scarce and there were seriously disquieting rumors from home.

The men who might, at this point, have won the war for the All-Highest lay beneath the churned up soil of Verdun or in the sodden swamps of the Somme. Machine guns, numbers of them, made up in some degree for the men who had disappeared in the hurricanes of steel on a hundred battlefields. Changes in tactics also helped eke out the men available. There was little to be done, however, in the matter of morale, nor could war-weary troops be turned again into fresh, eager soldiers. One great advantage remained to the veteran armies of the Central Powers in that they were veterans. They were soldiers, tried and proven time after time and the skill acquired over a period of four years would stand them in good stead now, when the need was so great.

With the world once more arrayed against a huge, efficiently deadly German military machine, and hoping that constant titanic struggles will deplete its strength to the point of military or domestic collapse, it is interesting to turn back the pages twenty-three years to 1918 when the German dynamo was turning slowly and fitfully, when constant fighting had reduced a formidable foe to the point of defeat. The pages of field messages and reports from German front line troops tell the story of constantly increasing pressure against a dam no longer able to hold back the angry flood. Contained between their sombre lines is the warning that a German foe is a hardy one and that even a weakened Germany is a dangerous enemy, demanding the utmost in energy, strength and resources if it is to be defeated.

In the War Diary of the 31st Bavarian Infantry, under the date-line of September 29, 1918, there is a typical entry:

"At 9:00 AM severe hostile fire. 11:00 AM attack, breaking through on the left of the 2nd Battalion, the latter being forced back into the Bemont Position, where the attack is halted. In the evening the regiment consists of 33 men. Relief. Regt moves to Machault."

That the regimental strength report was no typographical error is proven when, after rests on the 30 September and the 2 October, during which replacements were received, on 3 October the regiment moved back into the line:

"9:00 AM, Alert order. The last remnants of the regt (about 120 men) marches against St. Etienne under the command of the regtl commander to secure MLR, No.

4 against threatening breakthrough. Heavy casualties as a result of bombs dropped by fliers. The 3d Battalion (40 men) is finished as a result thereof during its march to Ludwig ridge."

The 17th German Division, on 5 October, 1918, reported concerning the fighting efficiency of its men:

"To attack now and then retreat into a position not yet existing in the terrain, is more than physical strength can endure. In keeping with the number of rifles (700) which probably will still be available, the sector should not be wider than about 600 meters, if two battalions are to be detached as Corps Reserve."

On 11 September, the Division had reported:

"Before being employed on a combat front, the division will need fourteen days of rest, in which connection favorable shelter conditions will be necessary."

It is not recorded whether or not those fourteen days rest under "favorable shelter conditions" were achieved, but it would appear to be doubtful, for on 3 October the division noted:

"The regiments no longer have any combat power worth mentioning."

Under the conditions these sentences suggest, it is more than surprising to read further down that:

"Untiring efforts on the part of the superiors still make it possible to keep up the morale of the troops in spite of all the demands made upon them."

From the 89th Grenadier Regiment on 8 October, 1918, disquieting news is forwarded to the 34th Brigade:

"The resistance powers of the men who during the attack have accomplished the superhuman and have given their all, were completely spent in today's extraordinarily violent hostile attack.

"If during the course of tonight or tomorrow morning a hostile attack should be started, even if made only by weak forces, it will hardly be possible to hold the position.

"The regiment urgently requests brigade to recommend to higher authority that the troops be withdrawn this very night, or else relieved, in order to prevent the complete annihilation of the last remnants of the regiment, which to the last has fought so brilliantly, thus rendering the regiment useless for further engagements.

"If no action in keeping with the proposal of the regiment can be taken, the latter will no longer be in a position to assume responsibility of any kind."

In the same vein is the request from the Bremen Regiment, the 75th Infantry, on 8 October:

"In view of the heavy losses suffered by the regiment, and the consequently very low trench strength, the regiment is not able to evacuate with its own forces the numerous wounded still lying in its front lines. In order to be able to undertake their evacuation before morning, the regiment therefore requests the detail, with as little

(Continued on page 58)

FIFTEEN RED CROSS WORKERS IN ICELAND TO AID ARMED FORCES

Washington, D. C.—A contingent of fifteen American Red Cross workers has arrived safely in Iceland for duty with the American armed forces stationed there, the American Red Cross announced today.

The party, headed by Charles McDonald, (Billinghurst Hotel), Binghamton, N. Y., will conduct the Red Cross welfare program for soldiers and sailors, conduct a recreation program for hospitalized and convalescent service men, assist in the civilian-relief program of the island and assist the survivors of ocean disasters arriving in Iceland.

Dr. George K. Strode, of New York City, associate director of the international health division of the Rockefeller Foundation, accompanied the party, representing the Red Cross for the purpose of making a survey of public health problems in consultation with the Icelandic Red Cross and government authorities.

The other thirteen workers included: Lake F. Russell, (55 Delmont Drive, N.E.) Atlanta, Ga., former Mercer University football coach, who as field supervisor will be in charge of the Red Cross services to the armed forces; Frank H. Hagen, Monroe City, Mo., recreational director; Miss Ettienne Baldwin, (Biltmore Hotel), Atlanta, Ga., assistant field director at the station hospital; Miss Jane Goodell, (400 E. 53rd St.), New York City; Miss Ethel Hague Rea, (Hotel Seville), New York City, recreation worker; Miss Betsy Lane Quinlan, (Prospect Hill), Waynesville, N. C., recreation worker; Miss Doris Thain, (Birmingham Athletic Club), Birmingham, Ala., recreation worker; Miss Mary Dolliver, (806 N. 21st St.), Fort Dodge, Ia., recreation worker, and Miss Elizabeth Clark, Framingham Centre Mass. occupational-therapist.

The following were assigned to the unit as secretaries: Miss Nancy Duncan, (2902 Dunbarton Ave., N.W.), Washington, D. C.; Miss Camelia Greetham, (404 N. Nelson Street), Alexandria, Va.; Miss Helen Lee Stephenson, (1043 N.W. Second Street), Miami, Fla.; Miss Margaret Singer, Uniontown, Md.

PORTABLE RUNWAYS PROVING SATISFACTORY FOR AIR FORCE

(BY NCCSERVICE-GRAMS)

Washington, D. C.—Portable runways consisting of long, hinged sheets of metal that have been made into a landing strip, are proving satisfactory in facilitating rapid construction of air fields in time of an emergency.

Pilots of the 126th Observation squadron near Hoffman, N. C., have been testing it under as many conditions as possible. They have found rain does not make the metal face slippery and that it is as easy to land on as a regular runway. There is less wear on rubber landing gears than results from a concrete runway. Braking action after a plane has landed is considered easier than on the usual field.

Major General Henry F. Arnold, assistant chief of staff for air and commanding general of the air forces called the portable Marston landing strip "the year's greatest achievement in aviation."

DOG HOUSE DITTIES by Uncle Walter



"You're my pal," said Al to Joe.

"Here's advice you ought to know.

Pipes are most acceptable

When they smell respectable.

"Women faint and strong men whine

When you light that wad of twine.

Try Sir Walter for a while.

Got that other beat a mile."

Joe was smart. He switched and found

Why Sir Walter's world-renowned.

Milder-tasting. Never rough.

Fragrant, too, in every puff.

A SURE WAY TO KEEP OUT OF THE DOG HOUSE!



Clean your pipe regularly, and smoke a mild and fragrant blend like Sir Walter. The choicest burley in the Blue Grass is selected for this grand-smelling blend. No wonder it rates so high with the Marines!

KEEP OUT OF THE
DOG HOUSE
WITH SIR WALTER



Tune in...UNCLE WALTER'S DOG HOUSE
EVERY FRIDAY NIGHT ★ NBC ★ PRIZES FOR YOUR "DOG HOUSE" EXPERIENCE

Short Run STAMPING and FORMING

... Without Dies

BY A. T. O'NEIL, O'NEIL-IRWIN MFG. CO., MINNEAPOLIS

Extremely versatile method of forming produces parts within tolerances of 0.001-inch; appears well suited for wide variety of work; requires no costly dies



Fig. 1—Here is production setup of three machines shown in Figs. 2, 3 and 4 for producing formed channel sections

IT IS the custom to divide the die cost by the total number of metal pieces that are to be produced to obtain cost per piece. Where the run may be 5,000 or more pieces, especially where repeat runs are expected, quite a large die cost can be absorbed easily.

But where a small number of pieces—1,000 or less—may be required and there is no further use for the dies or die sets, excessive cost per piece of work produced may easily result.

To eliminate the expense of making blanking or forming dies for short-run work, a number of precision hand-operated bench machines have been developed as alternatives for blanking and forming dies. In a great number of instances, this equipment can duplicate metal stampings accurately on a semiproduction basis without the need for dies. Also, these machines are frequently able to eliminate one or more operations necessary in complicated progressive die work.

This equipment includes a precision bench bender, brake folder, press, punch, rod cutter, roller and shear, also a power-driven nibbler, a swage and a large straightener. These units are used individually and in co-operation with each other for duplicating metal pieces on a limited production basis with only a minimum setup cost and without specially made dies. Of this equipment, the bench shear, Fig. 3; the bench brake, Fig. 2; and the bench bender, Fig. 4, are the three most essential units.

Let's see how these units are used in a typical cycle of operations. One job required approximately 1,000 pieces or less of accurately duplicated non-stock angle or channel material, including a right and left-hand radius formed on ends. To duplicate these pieces by hand, the stock material is rapidly and accurately cut to angle or channel size with the Di-Acro die duplicating shear, Fig. 3. The resized material is quickly run through the Di-Acro die duplicating

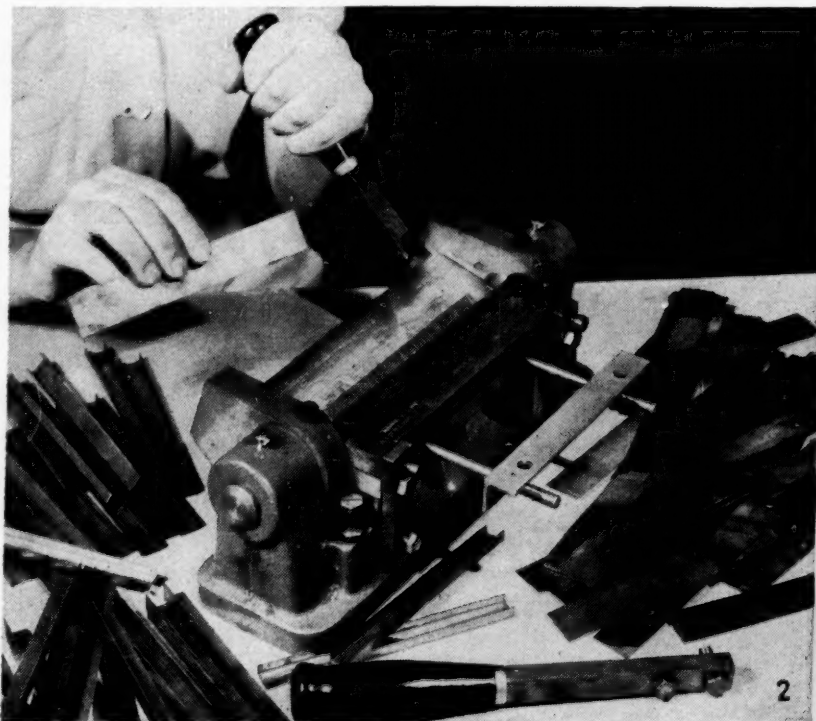


Fig. 2—Heavy duty bench brake easily forms channel or angle sections to any combination desired

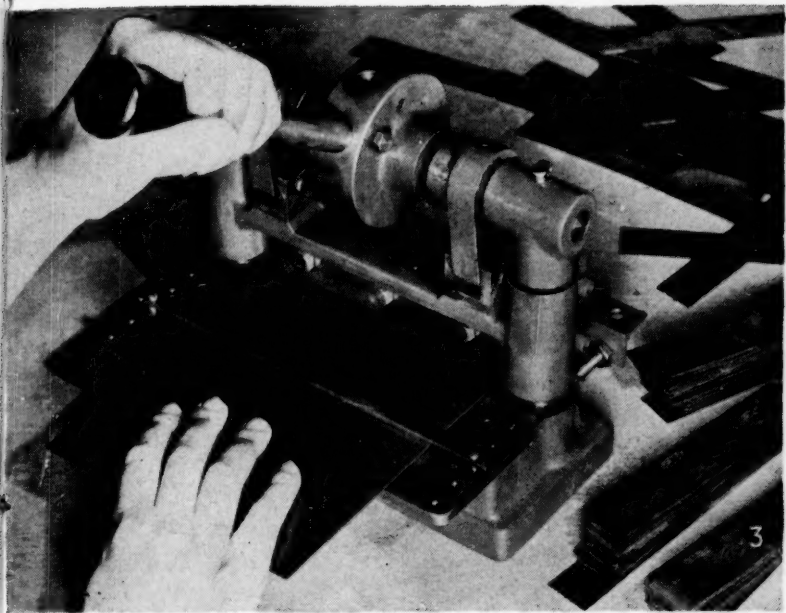
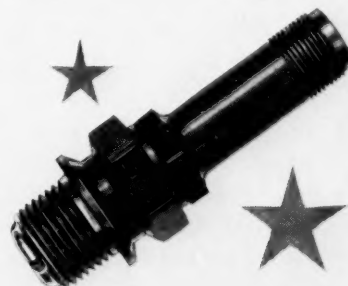


Fig. 3—Bench shear can be set up with stops for precision work

brake, Fig. 2, to produce the non-stock size angle or channel. Then the right or left-hand radius is formed on the Di-Acro bender, Fig. 4. The change over from right to lefthand radius is made possible by a single conversion. A typical production line of this sort is shown in Fig. 1.

This bender unit possibly is the most intriguing of the devices yet developed, for its metal duplicating possibilities are limited only by the possible metal duplicating problems. The ease of handling and the stability of setting obtained with this unit make it well suited to rapid duplicating and semiproduction work. Fig. 4, for example, shows only a few of the parts it has produced. Semiproduction work may be carried on with these units by ordinary labor. Not only are they light, portable and readily adapted for bench or assembly line work, but because of their ease of operation they can be operated equally well by either men or women. No skilled labor is required, not even in setting the machines.

The bender will economically duplicate ductile materials of hollow cross section as well as solid and will produce shapes and outlines of regular or irregular radii to tolerances usually expected only from forming dies. It is easy to make conversions to adapt the unit for rapidly forming round or square tube, angle, channel, half round or flat wire and strip stock formed on edge or vertically. The unit will accept a large variety of clamps, gages and material guides for accurately forming almost any material to shapes and degrees limited only by their mechanical properties. For rapidly receiving and delivering materials, an automatic nose efficiently functions for either right or left-hand direction of operation. Time required to change the direction of operation is less than a minute.



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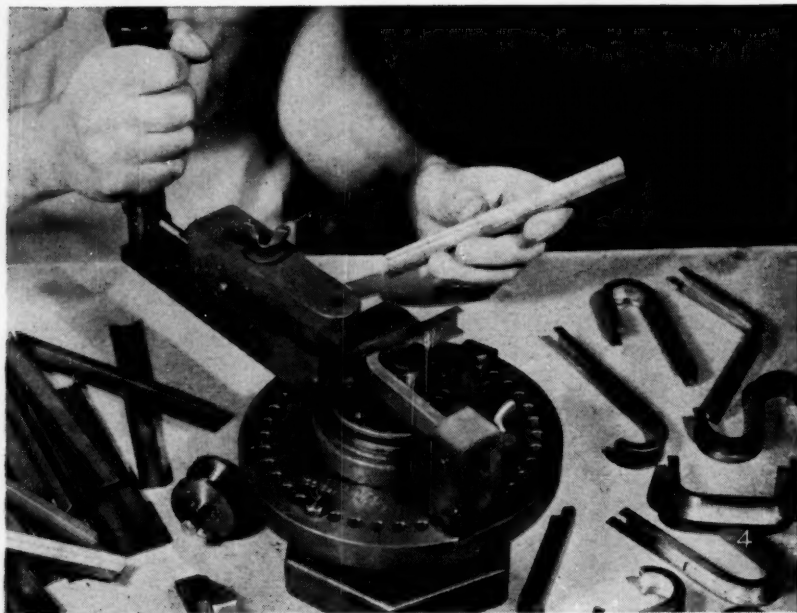


Fig. 4—Di-Acro die duplicating bender shown here easily forms right or left hand bends in channel. With simple conversions, can handle much other forming work within precision limits of 0.001-inch

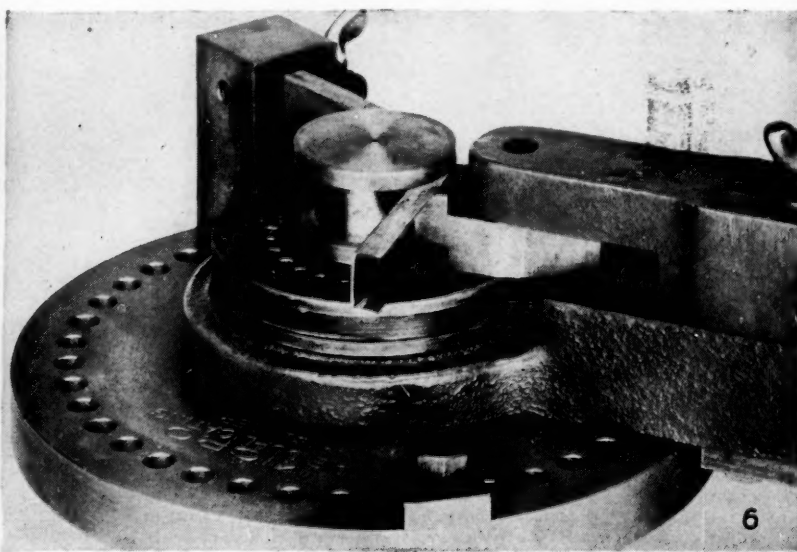
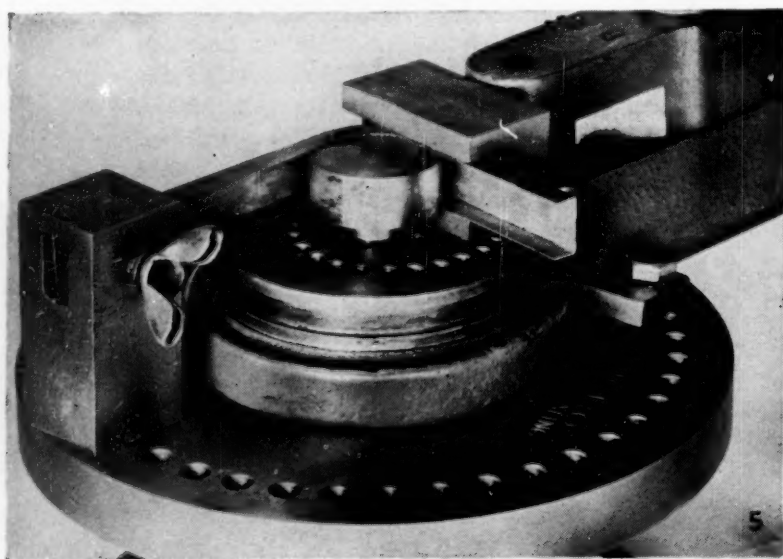
The standard bender may be located in any one of 12 convenient positions for bench operation. Additional operating positions may be gained each time one additional hole is drilled in the base. Holddown lugs of ample capacity securely retain the unit in its operating position.

A setup can easily be changed to handle a particular type of work and then changed back to the original setting to duplicate the first operations with tolerances not to exceed 0.001-inch. Stops and material guides facilitate operation at rates in excess of 1,000 pieces per hour, depending, of course, upon the material and type of work. All individual bends are made in one operation. Fig. 5 shows bender set up to produce a bend on open side of a channel

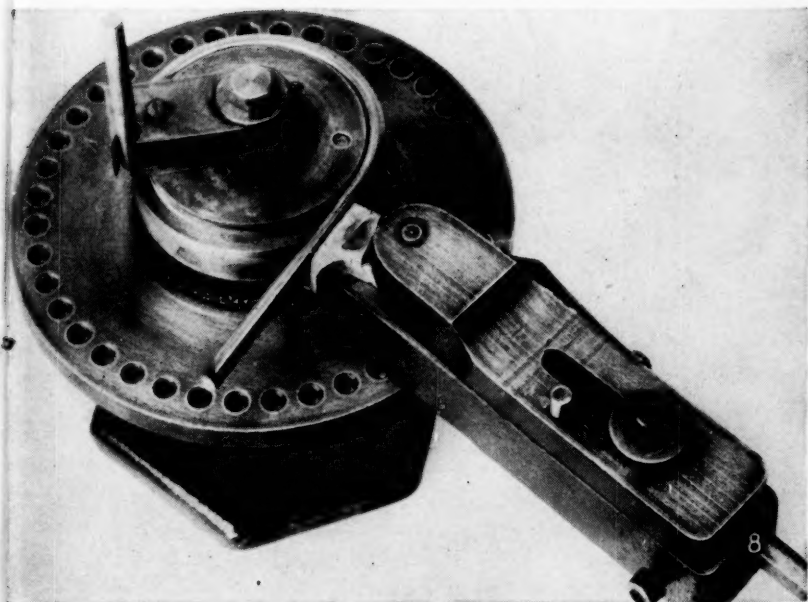
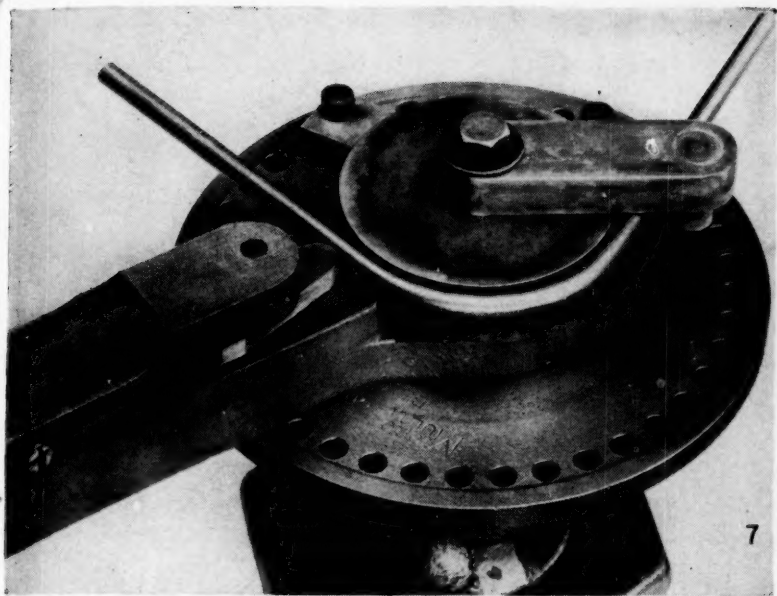
section while Fig 6 shows simple conversion for producing an outside bend in the same material.

Some of the accompanying illustrations show the ease with which a wide variety of work can be handled and the simple conversions which make it possible. For instance, Fig. 7 shows the unit set up for making a bend in solid rod. Here an overhead arm is employed to hold the portion of the rod that is to remain straight, while the arm of the machine is swung from right to left to produce the bend desired. Stops set in holes in the outer periphery of the base plate limit the bending operation.

This same machine is shown changed over for forming rod that already has a rightangle bend. The only change is to use a different type of fixed stop as shown in Fig 8.



Figs. 5 and 6, show how forming nose and mandrel can be changed to bend channel material either way

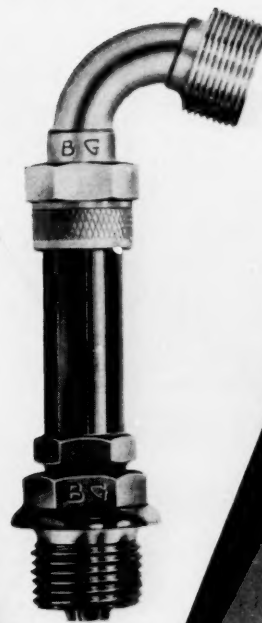


Figs. 7 and 8, show how other simple conversions (different forming noses and mandrels) are utilized in forming solid rod

This stop is placed on top of the bender and, of course, can be made longer if a straight portion is to be left in the rod before the bend. Here it will be noted a different type of shoe also is used to contact the rod in bending.

To convert this unit to handle tubing, a simple change is made in the forming tool as shown in Fig. 9. Here, also, a different type of fixed holder is used. The tubing cross section is not deformed. Roller bears against a hardened semicircular section eliminating all friction or sliding against tube surface. Of course bends of different radii can be accommodated merely by changing the diameter of the central form around which the tube is bent and by positioning the forming tool farther out on the arm. This tool can be adjusted to various positions easily by means of a simple clamp arrangement shown in various illustrations.

Fig. 10 shows the unit converted to bending flat stock



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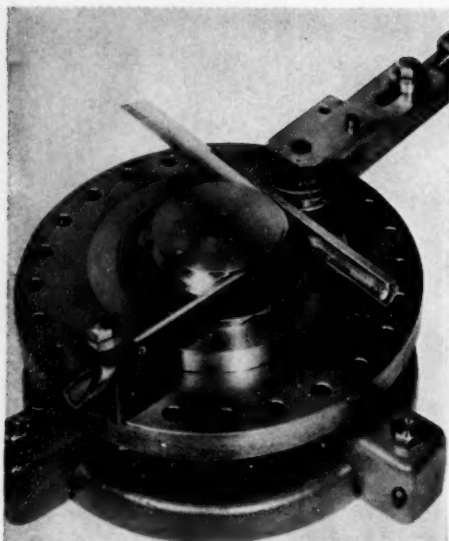


Fig. 9—Tubing is formed without flattening cross section and without friction on any surface as semi-circular former is used between forming roll and outer tube surface



Fig. 10—Flat strip is formed easily to almost any radius and angle of bend. Changing the stops makes accurate settings of the machine possible for wide range of work



Fig. 11—Right angle bends are formed without any difficulty by using a mandrel of the type shown here. Note spiral row of holes in mandrel block, which permits spacing pin at almost any radius

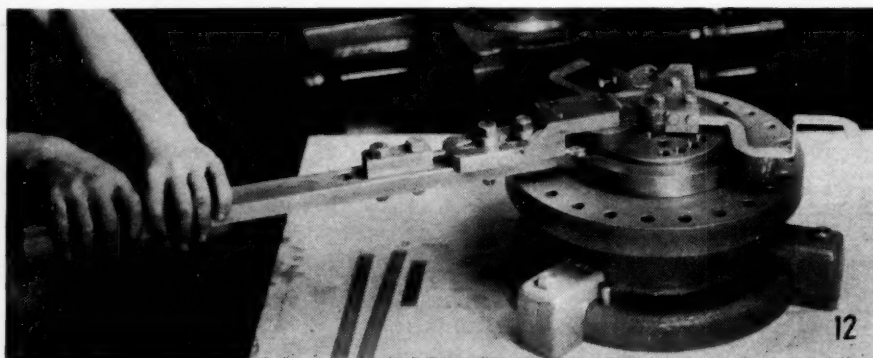


Fig. 12—After making vertical bends shown at right, same bender is converted easily for forming the edge bends in this copper bus bar for a switchboard

merely by changing the center form and the tool nose. Note here that the center tool form is made in two sections. The top section is merely a large "washer" of sufficient thickness. By using different diameter pieces here, bends of varying radii can be produced.

Note also the holes punched in the piece immediately below this to accommodate a pin which contacts the outer surface of the strip to hold it in place during bending. These holes and the pin which fits in them afford a stop at a large number of positions at varying distances from the center of the machine. This spiral series of holes for the pin is shown better in Fig. 11 where a rightangle bend is being formed in strip stock simply by changing the center fixture of the unit.

Fig. 12 shows various acute bends including edge bends in flat strip made with a simple conversion of the machine.

Figs. 13 and 14 show how coiling also is done on this same machine. In Fig. 13, the rod to be coiled is laid in the die and a tool to engage it for coiling is shown lying on the arm of the instrument. Note the simple construction of these devices. In Fig. 14 the winding tool is being inserted over the mandrel on which the coil is wound. Simply by changing the diameter of the mandrel and hole

in the revolving tool, the work can be coiled to different diameters.

These 14 illustrations afford some evidence of the extreme versatility of this method of forming. It is not difficult to see how this system can be expanded to cover a large number of other forming operations. As the cost of the conversion tools to handle any particular job is only a small fraction of the usual die costs, the method may be the means of producing important savings in short run and semiproduction work.

Inspection of the illustrations will show that the conversions require only the simplest of lathe turning and milling machine work—operations that can be handled by an ordinary machinist not necessarily skilled in tool or die work.

Obviously an extremely great range or variety of shapes may be acquired merely by changing the material guides or position settings of the shear, brake and bender. Either greater or less radii can be secured simply by changing stop locations on the bender. Sharp angles of less than 90 degrees can be produced or odd shapes made simply by bending the work around a center piece made with the desired contour.

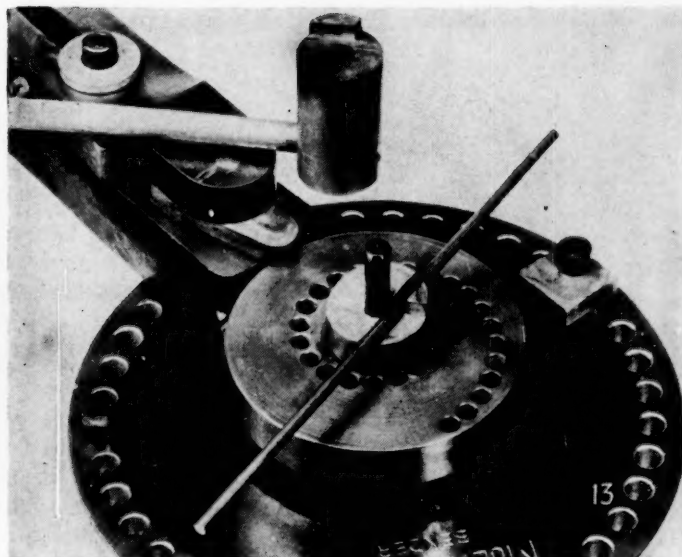


Fig. 13—This shows setup for coiling a spring from a straight bar. Coiling tool is shown resting on arm of machine. By changing diameter and slope of mandrel, coil diameter and pitch can be made any value desired

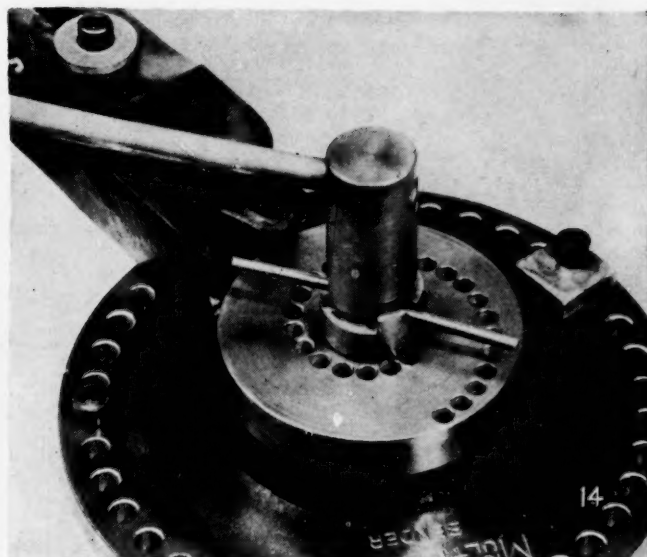


Fig. 14—Here coiling tool has completed formation of the coil

Moldings or other material of irregular cross section can be handled just as easily as other shapes. The use of a forming nose and center mandrel of correct outline is all that is necessary.

Fig. 12 well illustrates the versatility of this method of forming. Here $\frac{5}{8} \times \frac{1}{8}$ -inch copper bus bar material is being formed vertically using a simple conversion of the same bender. This bus bar is for a switchboard being



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Quite a few of these benders are in use forming "normalized" SAE X-4130 molybdenum steel materials to predetermine radii established by the United States Air Corps and doing this with precision. This is a type of work that is extremely difficult to handle with conventional sheet metal working equipment. Yet a roller brake of the type shown in Fig. 2 is being used by one aircraft manufacturer to form X-4130 material in widths up to 12 inches both with and against the grain.

A new Complete Equipment booklet describing the earth-moving, land clearing and snow removal equipment manufactured by the LaPlant-Choate Manufacturing Co., Inc., of Cedar Rapids, Iowa, has just been released.

Each model is described generally, with explanations as to size and capacity. The fact that all equipment is built exclusively for use with "Caterpillar" tractors is emphasized, as is their world wide sales and service organization.

Sections are devoted to cable-operated scrapers, ranging in size from 12 to 33 cubic yards; to hydraulically operated scrapers of 3.8 to 8.2 yards, and the new CW-10 "Carrimor" ten cubic yard scraper. Trailbuilders, bulldozers, tampers, rippers and other tools are also included.

The booklet is 16 pages in two colors, and may be obtained from any distributor or the manufacturer.



Lieutenant General Thomas Holcomb congratulates Frank X. Reagan, former All-American football star at the University of Pennsylvania, upon receipt of his commission as a second lieutenant. Reagan won his commission in the Fourth Candidates' Class at Quantico, Virginia.

LT. ROBERT L. SKIDMORE, U.S.MC., RET., ORDERED TO ACTIVE DUTY

The military establishment of the United States is calling into active service men from all over the country who are particularly qualified for the jobs that have to be done. They are even reaching into defense industries when they feel that the specialists employed there can contribute more to our ultimate success by participating directly in the military activities.

The U. S. Marine Corps has just ordered to active service Lt. Robert L. Skidmore, Marine Corps (Retired), who has for the past three years served the Marmon-Herrington Company, Inc., as export manager.

Mr. Skidmore is a native of Indianapolis where he graduated from the Manual Training High School and later graduated from the U. S. Naval Academy at Annapolis.

Following the World War he served with distinction at various Marine posts and with several Marine Expeditions overseas. As a result of the above service he is entitled to wear the U. S. Victory Medal, the Nicaraguan Expeditionary Medal, the China Expeditionary Medal, and the Nicaraguan Medal of Merit with Star. He was also recommended for the Navy Cross for conspicuous Service.

Being an accomplished linguist, he has been particularly effective in managing the rapidly expanding export business of the Marmon-Herrington Company, particularly in the Latin American countries.

In addition to the actual office management of the overseas business of the above company, Mr. Skidmore has made annual visits by air to all of the Central and South American countries for the purpose of establishing new distributors and maintaining contact with existing connections.

Not only the various industries but also the different branches of the military establishment, in the United States, as well as many allied foreign countries, are large users of Marmon-Herrington equipment.

Lieutenant Skidmore's experience with the Marmon-Herrington Company, manufacturers of All-Wheel-Drive Trucks, high-speed track-laying tractors, combat tanks and specialized military vehicles, should be particularly valuable in his renewed participation in the Marine Corps activities.

RED CROSS RECRUITS FOREIGN SERVICE UNITS TO AID ARMED FORCES

Washington, D. C.—Recruiting of trained personnel to serve the American Red Cross with American forces outside of continental United States is underway, Chairman Norman H. Davis announced today.

"Flying squadrons" are being formed to join any such force of the United States Army. Six of these units have been formed, Mr. Davis revealed, and eight more are now being organized.

Each unit will be subject to immediate call. The mem-

bers will perform the normal Red Cross welfare duties with the soldiers.

The administrative staff of each unit will be a field director with one or more assistants, a medical social worker, a recreation worker (woman) for convalescents and a recreation worker (man) for able-bodied soldiers. Important task of this group is to form liaison between soldiers and their homes, handling personal problems through local Red Cross chapters.

Similar groups now are attached to the armed forces stationed in Iceland, Alaska, Newfoundland, Trinidad, Canal Zone, Puerto Rico and Bermuda, Hawaii and the Philippines.

Members wear the uniform of the Red Cross Military and Naval Welfare Service, the same as worn by personnel in camps and bases in the United States.

Able-bodied, trained persons are being recruited for this foreign service. Physical fitness is being stressed so workers may endure abnormal living conditions. Persons with heavy domestic responsibilities are NOT encouraged to volunteer for this type of service.

ALMANAC OF THE MARINE CORPS

(Continued from page 33)

Pershing was honored with a parade by the Marines of the post.

May 25

1917: The First Battalion, Fifth Marines, under command of Major Julius S. Turrill, U.S.M.C., was assembled at Quantico, Va., where it was encamped and given a period of intensive training prior to its departure early in the following month for the navy yard, Philadelphia, Pa., to join the remainder of the regiment and embark for services overseas in the World War.

May 25

1918: Brigadier General John A. Lejeune embarked on board U.S.S. "Henderson," for foreign shore expeditionary service in France. Later, in 1918, with rank of major general, commanded the famous Second Division in France and Germany.

May 26

1916: Marine detachment of the U.S.S. "Louisiana" landed at Monte Cristi, D. R., and occupied that city. An expected attack by rebels was the cause of the landing. The attack did not occur.

May 26

1917: Congress authorized the strength of Marine Corps at 1,200 commissioned officers, 100 warrant officers, and 30,000 enlisted men. Further increases followed during the period of the war.

May 27

1941: The following, from the President's proclamation of the Unlimited National Emergency:

"Now therefore I, Franklin D. Roosevelt, President of the United States of America do proclaim that an unlimited national emergency confronts this country

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which requires that its military, naval, air and civilian defense be put on the basis of readiness to repel any and all acts or threats of aggression directed toward any part of the Western Hemisphere."

May 27

1921: The Elliott Trophy Match, fired at Quantico, Va., was won by the Parris Island team of Marines with a score of 1,582. Each man fired the Army qualification course, and two sighting shots for record at 1,000 yards.

May 27

1798: Congress authorized the seizure of French armed vessels which were carrying on belligerent operations in American waters. This was at the beginning of the Naval War with France.

May 28

1917: Major Logan Feland, and Major Robert H. Dunlap, Marine officers detailed to the staff of General Pershing, sailed from the United States for duty overseas during the World War. Later, in 1918, Feland, with rank of Colonel, commanded the Fifth Marines in some of the hardest fighting of the war. Dunlap, with rank of Colonel, commanded the 17th Field Artillery Regiment of the Second Field Artillery Brigade, Second Division. Both have brilliant records.

May 29

1917: The Secretary of the Navy directed the Major General Commandant of the Marine Corps to organize the Fifth Regiment of Marines for service as part of the first American expeditionary force to France. The organization and training of the Regiment speedily followed, after which the Regiment hastened to France.

May 29

1847: Commodore M. C. Perry, U. S. Navy, objected to the idea of giving up his Marines to the Army. On this date he recommended that "The war complement of Marines for each vessel should be doubled during the continuance of the war and stated that 'in transferring the Marines of the Squadron to serve with the Army' he would have to abandon positions ashore essential to the naval campaign." The Navy Department's idea was to give the veteran Marines to the Army and fill the Squadron's quota with recruits. He continued to protest, and in the end gave up only a comparatively small number of his Marines to the Army.

May 29

1839: Colonel Commandant Archibald Henderson ordered that the uniform of the Marine Corps be changed back to blue, instead of the green uniform, which had been adopted and worn for some years after its adoption in the year 1833.

May 30

1920: Marine Corps Mapping Detachment, composed of 9 officers and 48 enlisted men commanded by Captain S. C. Cumming, U.S.M.C., sailed from the United States for France for the purpose of mapping World War battlefields.

May 30

1848: Treaty of peace with Mexico, following the war with that country, was ratified. A regiment of Marines remained at Alvarado and Laguna for some weeks after the ratification.

May 31

1918: This date found the Germans marching in the direction of Paris down the Marne Valley. It was at this critical time that the Second Division, including the Marine Brigade, was thrown into the line and rendered great assistance in stopping the most dangerous of the German drives. On May 31, the Marine Brigade left its training area near Montdidier, and proceeded by motor trucks and other available transportation to check the progress of the enemy towards Paris. Brigadier General Charles A. Doyen, U.S.M.C., was in command of the Marine Brigade at this time. Beginning of the great World War battle operations in the Chateau-Thierry sector, in which the Marines covered themselves with glory in the fighting at Belleau Wood, at times most

*"This is the way
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desperate. The fighting of the Second Division in the Chateau-Thierry sector was divided into two parts—one consisting of six days of hard defensive fighting (May 31 to June 5), followed by a vicious offensive which continued throughout most of June, until the Germans were finally driven out and possession taken by the Marines.

June 1

1813: The ill-fated battle between the "Chesapeake" and "Shannon." In response to challenge for a duel the American ship "Chesapeake" (Captain James Lawrence) engaged the superior British ship "Shannon" off Boston. Ten minutes after the engagement opened the enemy boarded the American vessel. Desperate hand-to-hand fighting ensued in which the Marines took prominent part. Fourteen Marines of the ship's complement were killed and twenty were wounded. Lieutenant James Broom, commanding the Marine Guard, fell early in the action; but even after this the Marines, under the command of Sergeant John Twiss, did splendid work. In the course of the battle Captain Lawrence was mortally wounded and while being carried below gave utterance to the immortal expression, "Don't Give Up the Ship!"

June 1

1780: Naval battle between the "Trumbull" and the British privateer "Watt." Captain Gilbert Saltonstall in command of the Marines was wounded eleven different times with buckshot and splinters. In this "drawn battle," "the Marines fired pistols during part of the time, exclusive of which they expended nearly 1,200 rounds."

June 1

1916: Battalion of Marines and Sailors (about 200 in all under Major C. B. Hatch, U.S.M.C.) landed at Puerto Plata, D. R., under cover of a bombardment of the forts by naval vessels, drove the opposing rebels away and took the city. Captain J. H. Hirshinger, U.S.M.C., was killed and one Marine wounded in the fighting.

June 1

1918: The Sixth Marines relieved the French on the support lines northwest of Chateau-Thierry; to their right another sector was held by the Fifth Regiment. To the right of that the French held the front. Support positions behind the front were held by other troops of the Second Division. As the French withdrew to the rear, hard-pressed by the enemy, the Marines moved up and held the first line. This was at the beginning of the Aisne Defensive that stopped the Germans in their march towards Paris.

June 2

1891: Detachment of Marines from U.S.S. "Kearsarge" landed on Island of Navassa, West Indies, during labor troubles. They remained on shore for three weeks and were highly commended for their services.

June 2

1918: All companies of the Marine Brigade were in position. The enemy attacked along the Brigade front at 8:30 a.m., and all machine guns of the right group (6th Machine Gun Battalion) immediately went into



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action. The enemy advanced in several thick waves towards Bouresches and Triangle Farm. Fire was opened by all guns of the right group at about 1,600 meters. When the advance reached a point in the wheat field, it was held up by the terrific and deadly fire from the machine guns and rifle fire. From this point the enemy advanced in thin lines by rushes, dropping every few meters and taking advantage of the tall wheat for concealment, and filtered into the Bois de Belleau, where they took cover behind large boulders and in deep ravines. By noon the enemy's artillery fire increased in intensity, considerable artillery having been brought up. For the next three days the Marine Brigade was occupied in turning back a number of enemy attacks.

June 2

1836: Soon after the uprising of the Creek Indians in Georgia, Colonel Commandant Archibald Henderson of the Marine Corps took to the field on this date and commanded the Marines in person while combating the Indians in Georgia and Florida. This was the first instance in the history of the Corps that such action was taken by its Commandant.

June 3

1918: In the Chateau-Thierry sector, "A retreating French officer gave an order in writing to an American officer to fall back from the position which he was holding. * * *" Some say that Captain Lloyd Williams, commanding the 51st Company, received the order and replied "Retreat? Hell, I just got here!" Others credit Lieutenant Colonel Frederic M. Wise, commanding the 2d Battalion, as having received the order and replying "Retreat? Retreat Hell! We've just come! We'll let the Bosches do the retreating!" "The spirit of this army is the spirit of the offensive, and we are going to be just as damned offensive as we can!" exclaimed Major General Charles H. Martin, 86th Division, at Camp Grant in the early training days of the American troops. American Soldiers, Sailors, and Marines have always had a propensity for being "damned offensive" and the "Retreat—Hell" remark might be attributed to any American fighting man in the circumstances.

June 4

1892: Colonel William Remey, U. S. Marine Corps, was selected as the first Judge Advocate General of the Navy, and served as such for twelve years. Marine officers, Edwin Denby, and Henry L. Roosevelt, have since served as Secretary of the Navy, and Assistant Secretary of the Navy, respectively.

June 4

1805: Peace concluded with Tripoli, ending the depredations of the Barbary corsairs on American ships and commerce, for a time at least. The Marines loomed largely in the War with Tripoli, both in sea and land operations.

June 4-6

1918: Marines stop Germans at Les Mares Farm, the nearest point to Paris reached by the enemy in 1918.

June 5

1912: Another regiment of Marines, assembled at New York and Hampton Roads, embarked on ships of the Atlantic Fleet, and later landed in Cuba. All Marines in Cuba were organized into a brigade under command of Colonel Lincoln Karmany, U.S.M.C., with headquarters at Guantanamo.

June 6

1918: Following almost a week of stubborn defensive fighting (which has been termed the Aisne Defensive), came the offensive operations in the Chateau-Thierry sector, France, of about three weeks' duration, on the part of the Second Division in which the Marine Brigade took part in fighting so desperate as to be indescribable, but which resulted in the utter defeat and turning back of the German army.

First attack by Second Division (1st Battalion, Fifth Marines): Early in the morning the 1st Battalion attacked from Hill 142 north of Champillon and drove into the German lines for over a kilometer towards Torcy. "One Marine corporal and the remains of his squad reached Torcy. He sent back word by one man, keeping two with him, that he had captured the town, but was running out of ammunition and needed reinforcements. Later a dead private of Marines was found ahead of the lines in a shell hole with empty cartridge cases, which bore mute testimony to the truth of a statement which the Germans published, that a captured American from the Second Division had stated: " 'We kill or get killed.' "

Second attack by Second Division: At 2 p.m., the attack on Bois de Belleau and Bouresches began. The town of Bouresches was captured, but the advance into Bois de Belleau was checked after progressing several hundred yards. The fighting continued throughout the night and extended to the right, and involved the Third Brigade, which attacked and advanced its line to the movement of the Marine Brigade. The usual German counter-attacks followed, but were repulsed.

June 7

1917: Fifth Regiment of Marines organized this date at Navy Yard, Philadelphia, when all the units were assembled for the first time; Colonel Charles A. Doyen, U.S.M.C., assumed command. The composition of the regiment at the time was as follows:

Headquarters Company and Supply Company
1st Battalion (15th, 49th, 66th and 67th Companies)
2nd Battalion (23rd, 43rd, 51st and 55th Companies)
3rd Battalion (8th, 16th, 45th and 47th Companies)

Later, in France, the composition enlarged was changed somewhat from the above.

June 6

1918: The decorations and awards for Marine personnel, for bravery and gallant conduct in the battles of the World War were numerous. For conspicuous gallantry and intrepidity above and beyond the call of duty in action with the enemy near Chateau-Thierry, France, Gunnery Sergeant Ernest A. Janson, U.S.M.C., was awarded the Congressional Medal of Honor. "Immedi-

ately after the company to which he belonged had reached its objective on Hill 142, several hostile counter-attacks were launched against the line before the new position had been consolidated. Gunnery Sergeant Janson was attempting to organize a position on the north slope of the hill when he saw 12 of the enemy, armed with five light machine guns, crawling toward his group. Giving the alarm, he rushed the hostile detachment, bayoneted the two leaders, and forced the others to flee, abandoning their guns. His quick action, initiative, and courage drove the enemy from a position from which they could have swept the hill with machine-gun fire and forced the withdrawal of our troops."

June 8

1918: Brigadier General John A. Lejeune, U.S.M.C., who had sailed from New York on board the U.S.S. "Henderson," arrived in France. He served for a time with the 35th Division, and as commanding officer of the 64th Brigade of the 32nd Division, and three regiments of French infantry, in addition to the 64th Brigade, in the front line early in summer of 1918. Later (July 28, 1918), placed in command of the famous Second Division with rank of Major General. Commanded the Second Division in remaining big battles of World War, including the St. Mihiel, Champagne, and Meuse-Argonne operations, Crossing of the Meuse, and finally the march to and occupation of Germany.

June 8

1918: Fierce fighting at Belleau Wood, since June 1, was to continue for more than two more weeks.

June 9

1918: Translated, as follows from the German records: "... "It would be desirable to have a third company placed in the front line, in order to enable us to take back reserves. Within the woods (Belleau Wood), it is just about necessary to have visual contact between squads, since the Americans sneak forward like cats between the bushes and rocks." (Report of the 7th Co. to 2-40th Fus. Regt.)

June 9

1921: Second Lieutenant Walter Vernon Brown, U.S.M.C., was instantly killed and Sergeant Alvin R. Bugbee was seriously injured, when a Marine Corps airplane fell 500 feet into the Potomac River near Colonial Beach, Virginia. The plane manned by Brown and Bugbee was one of a squadron of five that left Quantico for a flight to the mouth of the Potomac. Brown Field at Quantico later was named in honor of Lieutenant Brown, pilot of the ill-fated plane.

June 10

1898: The first troops to land in Cuba was the First Marine Battalion under command of Lieut. Colonel R. W. Huntington, at Guantanamo, on this date. Almost immediately the Marines became engaged and succeeded in defeating in a series of battles a large Spanish army, thus not only affording the Americans the benefit of control of that area during the war, but also paving the way

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for the acquisition of Guantanamo Bay as a most important naval base for the United States.

June 10

1882: Marines and sailors from U.S.S. "Lancaster," "Quinnebaug," and "Nipsic" landed at Alexandria, Egypt, and cooperated with the British naval forces in protecting foreign residents, and in restoring order during the great fire which followed the British bombardment.

June 10

1918: In the fighting at Belleau Wood during this period the Sixth Machine Gun Battalion of the Marine Brigade played its part quite effectively throughout the battle. On this date the American artillery laid down a heavy barrage 3:30 a.m., to 4:30 a.m., on Belleau Wood, preparing the way for the attack by the Sixth Marines which was supported by two companies of the Machine Gun Battalion. It was on this date that Major Edward B. Cole, commanding officer of the Sixth Machine Gun Battalion, was mortally wounded. He was cited in General Orders No. 40 of the Second Division, his notification reading as follows:

"In the Bois de Belleau, France, on June 10, 1918, his unusual heroism in leading his company under heavy fire enabled it to fight with exceptional effectiveness. He personally worked fearlessly until he was mortally wounded."

June 11

1918: The main infantry attack made, first by the 2nd Battalion, Fifth Marines, under command of Lieut. Colonel F. M. Wise, later joined by the 1st Battalion, Sixth Marines, against the enemy in the northern part of Belleau Wood. In this most daring attack the troops of the German 28th Division were driven from the southern part of the wood with a loss of 800. The Germans attempted later to retake their former position, but failed.

June 11

1871: In what was then termed the most important action since the Civil War, a battalion of Marines as part of the naval brigade attacked and captured the Korean forts after desperate fighting. The Koreans were thus chastised for serious offenses committed against Americans and American ships. The honor of the American flag was vindicated, and Korea made safe for Americans. Private Hugh Purvis, U.S.M.C., was awarded the Congressional Medal of Honor, and promoted to corporal, for being the first to scale the walls of the fort and capture the flag of the Korean forces. In referring to the part taken by the Marines in the Korean expedition, the Commander of the Flagship "Colorado" stated in his report, as follows:

"The Marines were always in the advance . . . To Captain Tilton and his Marines belongs the honor of first landing and last leaving the shore, in leading the advance on the march, in entering the forts, and in acting as skirmishers."

June 12

1918: On this date after hitting the German main line of resistance in Belleau Wood, when the attacking force of Marines and two companies of engineers became disorganized, determined officers and sergeants then began to work their way forward independently, wiping out enemy machine gun groups as they found them. They went through the German main line, completely disorganized it, and pushed on to the northeastern edge of the wood where they finally stopped after nightfall and reorganized. A battalion of the German 110th Grenadiers was driven out leaving only part of the 461st German infantry holding out among the boulders.

June 12

1918: The Citation of Captain E. C. Fuller, U.S.M.C., of Sixth Marines, who was awarded the Distinguished Service Cross, reads as follows:

"While fearlessly exposing himself in an artillery barrage for the purpose of getting his men into a position of security in the attack on Bois de Belleau on June 12, 1918, he was killed and thereby gave his life in an effort to protect his men."

June 13

1918: During the night of June 13, the 2nd Battalion of the Sixth Marines was moved up to the woods northwest of Lucy (France) to support the 2d Battalion, Fifth Marines against an expected attack. The enemy attacked the northwest corner of the Bois de Belleau during the night and were repulsed by the Marines. The same day a heavy attack against Bouresches was repulsed by the 3d Battalion with severe losses to the enemy. Major Ralph S. Keyser of the 3d Battalion reported that his men were utterly exhausted, and were doing wonderful work "on their nerve alone."

June 14

1777: The Marines were intimately associated with American flags that preceded the Stars and Stripes. Then on June 14, 1777, when the Stars and Stripes were authorized by Congress, Marines were serving in Philadelphia. Since then on all occasions, at home and in every part of the world, the Marines have been occupied in upholding the American flag and in adding to its traditions.

June 14

1917: The first expedition of American troops for duty overseas with the A.E.F., left the United States on board the transports "De Kalb," "Henderson," and "Hancock." The Fifth Regiment of Marines formed one-fifth of it.

June 14

1898: About 250 Marines and fifty Cubans formed and carried out the attack on Cuzco Well, in the district of Guantanamo, Cuba. The large force of Spaniards were defeated and their only water supply in the vicinity was cut off. Sergeant John H. Quick, U.S.M.C., was awarded the Medal of Honor for distinguished and gallant conduct in the battle at Cuzco, in signalling to the U.S.S. "Dolphin" on three occasions while exposed to heavy enemy fire.

June 15

1775: Of the early American flags of the Revolutionary War (prior to the adoption of the Stars and Stripes) under which Marines served was the flag flown over Arnold's boats on Lake Champlain in May, 1775; the flag under which the "Katy" and "Washington" of Rhode Island captured the enemy ship "Rose's" tender on June 15, 1775; the Pine Tree Flag of Washington's cruisers; the Rattlesnake Flag, and the Grand Union Flag. Marines served on the "Reprisal," flying the Grand Union Flag, the first Continental warship to visit Europe, and also under the flags of the privateers that preceded her.

June 16

1858: Secretary of the Navy Isaac Toucey ordered that 20 Marines be dispatched for duty in restoring order at the District of Columbia jail following rebellious conduct on the part of a number of the prisoners. Order was soon restored.

June 17

1918: In the Historical Section of the Marine Corps there reposes a reproduction of photograph, with the caption:

"A MAGNIFICENT EXAMPLE OF AMERICAN COURAGE AND DASH"—

showing the remaining effectives of the 2nd Battalion, Sixth Marines, Major Thomas Holcomb commanding, near Chateau-Thierry, June 17, 1918. As a war strength battalion was 1,000 officers and men, the depletion which this gallant organization had undergone in the preceding days is apparent. No doubt General Pershing had in mind this organization and others when he sent to the Headquarters of the Fourth Brigade of Marines, through the C. G., Second Division, the following message:

"Please accept for the Division and convey to General Harbord and the officers and men under him my sincere congratulations for the splendid conduct of the attack on the German lines north of Chateau-Thierry. It was a magnificent example of American courage and dash."

June 17

1847: Following the signing of the treaty of peace with Mexico, the final act of the Mexican War was the evacuation of Mazatlan, held by American troops including Marines.

June 17

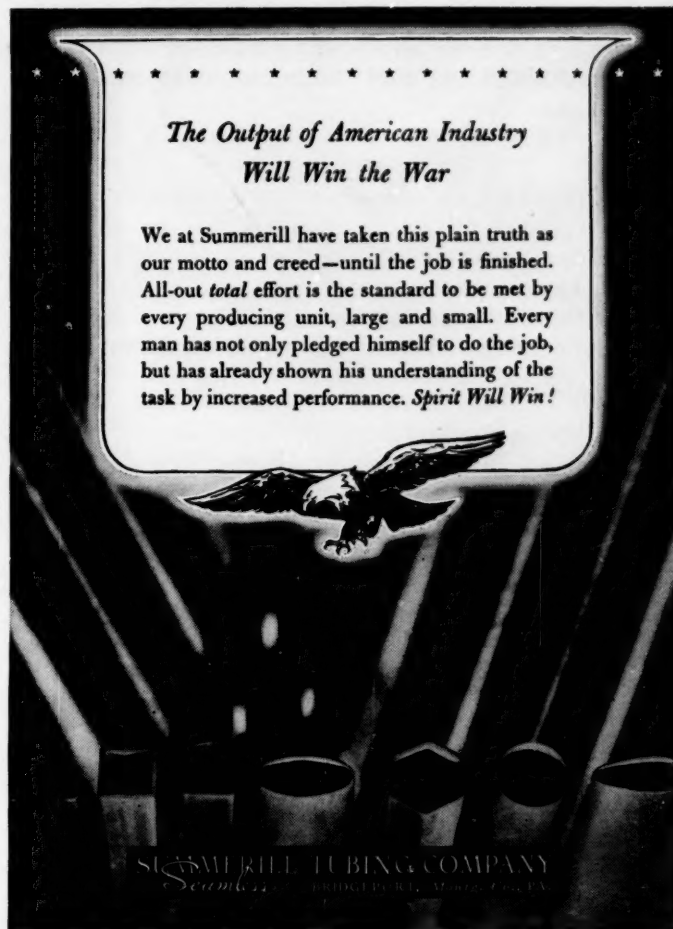
1916: Navy transport "Henderson" named in honor of Brigadier General Archibald Henderson (Commandant of the Marine Corps from 1820 to 1859). The long efficient service of the U.S.S. "Henderson" typifies the service of the officer for whom it was named.

June 18

1812: United States declared war against Great Britain. Marines performed outstanding service in this war—particularly in the numerous sea-fights.

June 18

1916: The Fourth Regiment of Marines, under Colonel J. H. Pendleton, arrived at Santo Domingo City, D. R.,



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and Pendleton took command of all naval forces ashore. A campaign of some weeks' duration ensued, marked by considerable fighting with Dominican rebels, ending with the occupation of Santiago.

June 19

1930: Marine air attack at Saraguasca Mountain, Nicaragua, provided the aviation arm plenty of excitement as well as a surprise party for the bandit leader Sandino—staged by the pilots and crew chiefs of Aircraft Squadrons, Second Brigade. The attack utterly demoralized the bandit forces and scattered them in all directions.

June 19

1920: Major General John A. Lejeune, with brilliant record as commanding general of the Second Division, in France, appointed Major General Commandant of the Marine Corps.

June 19

1900: During the Chinese Boxer Rebellion a battalion of Marines under command of Major (later Major General) L. W. T. Waller, arrived in China and began the march on Tientsin. Later took part in the Battle of Tientsin and the relief of the beleaguered garrison at Peking. This force had proceeded to China from the Philippines following the order that all available Marines in the Philippines proceed to China for protection of endangered Americans.

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June 20

1917: Marine organization designated as First Base Detachment, (1,200 officers and men) under command of Lieut. Colonel H. I. Bearss, U.S.M.C., was assembled, organized and trained at Quantico, Virginia, for World War service. The detachment occupied tents on the present parade ground. It left Philadelphia the following month and proceeded to France

June 20

1918: Major L. W. T. Waller, Jr., U.S.M.C., took command of the Sixth Machine Gun Battalion, in Chateau-Thierry sector, relieving Major G. H. Osterhous who had assumed command soon after Major E. B. Cole was mortally wounded in the Battle of Belleau Wood earlier in the month.

June 21

1900: The U. S. Marine battalion, forming part of the Allied column marching toward Tientsin, China, reached the Chinese part of the city during the evening of this date. The companies forming the rear guard were compelled to fight a much superior enemy force of near 2,000 supported by heavy gunfire from the Chinese wall, in order to permit the Russians to withdraw to a more favorable position.

June 22

1917: At 10:15 p.m., this date, the U.S.S. "De Kalb" transporting units of the Fifth Regiment of Marines to France was unsuccessfully attacked by enemy submarine.

June 23

1918: The Battle of Belleau Wood now had been raging for more than three weeks. On this date the 3d Battalion, Fifth Marines, attacked the northwestern tip of Bois de Belleau but, due to the heavy machine gun fire of the Germans, was unsuccessful.

June 24

1918: In the course of the fighting in Belleau Wood the 2nd Battalion of the Fifth and Sixth Marines had suffered heavy casualties. The 2nd Battalion of the Fifth returned to Merry-sur-Marne where needed supplies and equipment were drawn. The battalion numbered but seven officers and 350 men, and the 300 replacements received were most welcome. On June 24th, Major Ralph S. Keyser assumed command of this Battalion, formerly commanded by Lieut. Colonel F. M. Wise. On the night of June 24th, a desperate expedient was undertaken. The 3d Battalion, Fifth Marines, was withdrawn to a designated point. All the next day an intermittent barrage was laid on the enemy positions and, from 3 p.m. to 5 p.m., our artillery fire was intensified. At 5 p.m. the 3d Battalion started forward behind this curtain of shell fire at the rate of 100 meters every three minutes. At 7 p.m. the 47th and 20th Companies which had been the assaulting wave were digging in. An enemy counter-attack on the 47th Company was repulsed shortly afterwards by this company and two platoons of the 45th Company which had been rushed up as reinforcements. The attack netted 240 prisoners, 19 machine guns and several trench mortars.

(Continued on page 62)

"SAFETY IN FLIGHT" BY ASSEN JORDANOFF

"Safety in Flight," by Assen Jordanoff, published by Funk and Wagnalls Company, 1941, is a very fine example of reducing a scientific subject to easy reading. This book is of interest not only to the aviator but to non-flying officers in the service and to the civilian.

It is not intended that the reader should consider himself an accomplished meteorologist, the object of the book being to impress the pilot and layman with the importance of the study of weather. The reader will find that the illustrations and explanations simplify many of the difficult problems of meteorology, and demonstrate the various steps necessary for efficient and safe operation of aircraft.

The subject book is highly recommended for any aeronautical library, not as a text book but as an excellent reading assignment to further interest in the subject.

H. C. MAJOR,
Lieutenant Colonel, USMC.

A. W. HERRINGTON ELECTED PRESIDENT SOCIETY OF AUTOMOTIVE ENGINEERS

Announcement has just been made by the Society of Automotive Engineers that A. W. Herrington has been chosen to guide the efforts of that important organization during the first year of America's active participation in the war. He is the head of the Marmon-Herrington Company, Indianapolis, Indiana, manufacturers of highly specialized automotive equipment for difficult civilian and military services. He is also chairman of the board of directors of the Merz Engineering Company, a Marmon-Herrington subsidiary, specializing in the manufacture of precision gauges, instruments and machines.

Mr. Herrington, who was elected overwhelmingly by the members of the Society, is eminently fitted for the job. Few men in the industry are more widely known and respected for outstanding accomplishment in the field of automotive engineering—and his intimate acquaintance with military transport problems throughout the world, gained during the first World War and since that time in frequent business trips to Europe, North Africa and the Near and Far East, will be of inestimable value to the country in the difficult days ahead.

Herrington is a forceful character, a dynamic speaker and an accomplished organizer. It is his announced purpose, during the coming year, to use the influence of his position as head of the powerful Society of Automotive Engineers to help synchronize the efforts of the entire industry into one great force for American defense and the successful prosecution of the battle against aggressor nations.



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4-POUND RADIO TELEPHONE RECEIVER AND TRANSMITTER ANNOUNCED BY THE WELTRONIC CORPORATION

A completely self-contained radio telephone combination transmitter and receiver weighing only four pounds, and not much larger than the handset of a "French" telephone, has been announced by the Communication Division of Weltronic Corporation, . . . E. Outer Drive,



4-Pound Radio Telephone Receiver and Transmitter announced by the Weltronic Corporation.

Detroit. The unit is being made available to governmental agencies and services, including municipal divisions, public utilities, fire and police departments, railroads and other transportation agencies, etc., as well as individuals, subject of course to licensing by the Federal Communications Commission where required, as well as priority rating.

Believed to be the most compact and light-weight complete transmitting and receiving outfit ever produced, the built-in battery power supply for the new Weltronic "Trans-Ceiver" under continuous operation, has a rating of about 8 hours. This is equivalent to approximately a week to a month's operation under "normal" intermittent service. The power supply is derived from standard

commercial batteries in order to keep battery replacement cost at a minimum and facilitate maintenance of operation.

With a range of upwards of a mile over land, the units are provided with off and on switches and finger operated selector to change from transmitting to receiving and vice-versa, while talking through the unit.

Although the Weltronic "Trans-Ceivers" are designed for operation on a single wave length, thus requiring no tuning in service, their frequency range is adjustable from 112 to 300 Megacycles through a simple externally accessible screw adjustment.

Also provided on the units are a volume control and a detachable adjustable short fish-pole type of aerial.

Construction of the "Trans-Ceiver" is as rugged as that of a commercial telephone unit.

In operation, when the toggle switch is thrown into the "on" position, the unit is "receiving." To talk through the unit, it is necessary merely to pull the selector finger lever down against light spring pressure. Releasing the selector lever switches the unit back to "receiving" again.

The Trans-Ceivers may thus be used in pairs or groups with or without a central receiving and transmitting control station.

JOE LOUIS SIGNS UP WITH UNCLE SAM

(BY NCCSERVICE-GRAMS)

New York City—Joe "And-Still-Heavyweight-Champion-Of-The-World" Louis has turned in his boxing title for one that Selective Service Board No. 20 of New York City has been handing out to a great many other Americans; Private, U. S. Army.

Known to Local Draft Board No. 20 only as Joseph Louis Barrow, the world heavyweight champion who successfully defended his title 20 times, was knocked out of the ring by Mr. Induction.

Shufflin' Joe was rightfully entitled to four more weeks of what private life he does have, but he shuffled into Local Draft Board No. 20 and volunteered to enter the Army immediately.

Before doing same he polished off Jacob (Buddy) Baer in typical one-round fashion for the Navy Relief Society the other eve. And symbolically enough the No. 20 turned up again—it being the 20th time the famous Brown Bomber slid between the ropes to defend his omnipotent title.

When Army stethoscopes were placed against the chest of the 200 pound draftee they were listening to the pound of a fighting heart that pumped its way through 56 fights to the happy tune of \$2,263,784.28.

Speaking as a buck private with plenty of bucks stowed away for future grocery-buying, Joe, as usual, didn't have much to say about stepping into this new fighting ring. But what he did say he meant. Joe said: "I just hope that I can do as well for Uncle Sam as I did for Uncle Mike Jacobs."

NAVY IS NOT IDLE, KNOX TELLS MAYORS

(By NCCSERVICE-GRAMS)

Washington, D. C.—Secretary of Navy Knox told a meeting of the U. S. Conference of Mayors here that the U. S. Navy is not idle and that it will strike "where and when we are ready, not before." Mr. Knox warned there would be "other reverses" besides the "severe losses" at Pearl Harbor. "I would not be frank with you," Knox said, "if I led you to believe that you could expect . . . dramatic developments of triumphant American full-scale naval engagements in the near future. . . . But you know that by this I do not mean to imply that the Pacific Fleet is idle and you will hear from it again and again; when and where careful strategic considerations dictate."

ORDINANCE EXPERTS TEST NEW STEEL-COPPER SHELL CASINGS

(By NCCSERVICE-GRAMS)

Washington, D. C.—Army ordinance experts are testing a method of combining soft steel and copper in the production of shell casings. If the experimental production is satisfactory, the method will drastically reduce this nation's copper shortage. About one-third of the U. S. copper supply for 1942 has been set aside for shell casings. A steel-copper casing would save up to 400,000 tons of copper per year.

STREAMLINING ADMINISTRATION

(Continued from page 16)

exigencies of the service may be promptly met. In addition to maintaining established levels the fund should be available for repairs and minor replacements to organization property. It should also be available for the procurement of special equipment, paints, lumber, tools, etc., for maintenance and improvements of temporary or semi-permanent camps.

Commanding officers of higher echelons should be authorized to increase the allowance of lower units during periods of unusual service.

4. *Clothing.* Unit commanders will seldom find it necessary to carry many items of clothing on hand. Their concern in this respect is limited to supervision of care and issues of clothing. Special articles issued for use during extremely cold or wet weather would be handled as allowance property. An inventory of clothing on hand should be attached to the Service Record of a man on transfer. Clothing may be issued either on a monetary allowance basis or as required on certificate of a commanding officer. If the monetary allowance system is used, the value should be credited on the payroll and all issues checked on the roll, thus eliminating the clothing record book. Special issues could be made gratuitously on orders of the Major General Commandant. Unit commanders would be charged with the responsibility of

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initiating disciplinary action against men for improper use or disposal of clothing.

No formal requisitions should be required for any class of property. Accountable officers would keep permanent record of issues but destroy memorandum requisitions when filled.

Division and post quartermasters should maintain sufficient stocks of all classes of property to fill all requisitions when submitted. Regimental Quartermasters should keep as large stocks as storage facilities at their base stations permit. Excess property that could not be moved to a new station or overseas because of lack of transport would be invoiced to the nearest post quartermaster on the movement of the regiment.

The above changes would relieve the Quartermaster of all records pertaining to personnel and permit him to concentrate on the problems of procurement and distribution. It will be noted that Bn 4s are eliminated from the chain of property responsibility. They can thus concentrate on distribution of automatic supplies and control of transportation facilities.

THE ONE SECTION

The personnel records section with its associate group, the pay section could be centralized by areas in order to eliminate most of the personnel and pay reports prepared by combat units. Not more than six areas would be required in the United States, not more than three for all stations in possessions of the United States, and for foreign service only one for each major theatre of operations. All muster rolls, pay rolls and other formal papers regarding personnel would be prepared in the area office. These area offices would be large, well staffed and make no pretense to mobility. Civil service personnel could furnish a large part of the clerical force for area offices outside foreign theatres.

The authority and responsibility of unit commanders would not be reduced under this system. Their responsibility would be fixed by fewer, simpler and less formal reports to be retained in the files of the area personnel office. Details of personnel and pay should be handled as follows;

(A) *By company, battery, or detachment:*

1. Keep Service Record Books as at present.
2. Keep Pay account books in peace times (Instructions and sample book have been submitted to the editor of THE MARINE CORPS GAZETTE).
3. Submit daily personnel reports in duplicate to next higher administrative unit. Present morning report with added remarks could be used. Unit commanders would be held responsible for overpayments to men due to erroneous statements or omissions on daily personnel reports. All statements or certificates effecting pay or military history would be attached to personnel reports. The report for the last day of each month should include a complete roster showing duty status of all personnel attached as of that day.

No other reports or rolls relating to pay or military history of personnel would be prepared by the company.

(B) *By personnel section of regiments or other administrative units:*

1. Keep personnel cards on which items effecting military history during time man is in unit are briefed.

2. Check daily personnel reports. Retain duplicates in file. Forward original and all attached papers to area personnel office.

3. Prepare daily change sheets. Distribution to area personnel and pay office, higher and lower tactical units and all staff sections.

4. Prepare strength and distribution reports as required by higher tactical commanders.

5. Issue travel orders, transfer orders, etc., and forward official copies to area personnel and pay offices.

(C) *By the Area personnel office:*

1. Prepare muster rolls for all units within the area. Rolls would be prepared from data on daily reports and change sheets. Rolls would be signed by the area personnel officer or forwarded to the unit commander for signature. A copy would be furnished the unit for file.

2. Prepare strength reports as directed by tactical commanders within the area or by higher authority.

3. Keep permanent file of personnel cards, briefed to show date of entry into area, muster rolls on which shown, and disposition of Service Record Card on leaving area for any reason.

4. Keep Service Record Cards for all men in area from muster roll entries. A new card would be prepared for each enlistment. All enlistment entries shown in Service Record Book would be made on the card, and thereafter all remarks shown on muster rolls would be entered by the area personnel office. After transfer of a man to another area the Service Record Card would be mailed to the personnel office of the new area. The Service Record Card form should be printed on a standard letter size folder. Copies of letters of commendation, promotions, reduction, courts, etc., would be filed with the card.

(D) *By the Area pay office:*

1. Prepare pay rolls to settle all enlisted men shown on muster rolls of the area. Data would be obtained from post and regimental change sheets. Remarks would be checked and certified by the area personnel officer.

2. Keep Pay Record Cards (Sample submitted to the editor of THE MARINE CORPS GAZETTE) for all men carried on rolls. A new card would be prepared for each enlistment. On transfer the card would be balanced and mailed to the new Area pay office. On discharge the card would be mailed to The Paymaster, Marine Corps, for file.

3. Keep pay accounts of all officers within the area.

4. Make all payments for mileage, travel expense, arrears in pay, etc., within the area.

5. Furnish unit paymasters with statements showing rates of pay and balances due officers and men attached to their units.

6. Request the aid of unit paymasters in obtaining such records and certificates as are needed to complete accounts.

7. Prepare final settlements of pay for discharge.

8. Submit accounts quarterly.

(E) *By Unit or roving paymasters:*

1. Make payments for current pay and advance pay to officers and men within the unit and to casuals in immediate vicinity. Payments to enlisted men would be on individual or consolidated cash receipts prepared in the unit pay office and containing a certificate by the unit commander that men paid are in a pay status on date of payment.

2. Account for all payments made on schedule of disbursements, sending requests for checkage to area paymasters handling accounts.

3. Make entries in Pay Account Record Books showing allotments, deposits checkages, payments, and balancing entries.

4. Assist officers and men in the preparation of vouchers for mileage, claims, etc.

The changes in system mentioned herein are radical in some items, but the work needed to effect the changes by all echelons is simple. Organization of Area personnel and pay offices would be the greatest task.

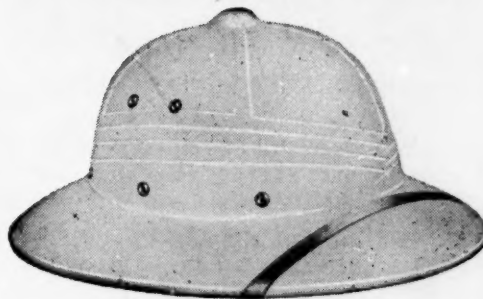
For personnel, the area office would be established and furnished a copy of the last muster rolls submitted by units. As soon as practicable a representative would visit all units and prepare Service Record Cards from the Service Record Book.

For pay, unit paymasters would prepare pay record books and cards from Service Record books and forward cards to Area pay offices. They would transfer accounts of all officers to the Area Pay Office.

Area offices would be staffed by warrant, enlisted and civil service personnel drawn from The Adjutant and Inspectors Department, The Paymasters Department and unit pay offices. Total service personnel required would be less than under present system; for example a present unit pay office consists of; 1 Commissioned Officer, 1 Warrant Officer, 6 enlisted men and 14 units of office equipment to handle accounts of 2,400 men. Under the proposed system 1 Commissioned or warrant officer, 4 enlisted men with 5 units office equipment could easily handle up to 5,000 accounts with slightly slower service on special vouchers but better service on current or advance pay.

The changes suggested herein would require no change in law, no modification of executive orders, very few changes in Navy Regulations, and more deletions than additions to the Marine Corps Manual.

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DUTIFUL CORPORAL BAILS OUT BY MISTAKE OVER BROOKLYN

(BY NCCSERVICE-GRAMS)

New York, N. Y.—Lieutenant John A. Kelting pointed down at Brooklyn 4,500 feet below his Army training ship and shouted "Look!" to Corporal Albert Moxley of the 16th Pursuit Squadron. To his amazement, the Corporal crawled out of the two-seater basic training plane and jumped out over the city with his hand on the ring of his parachute. A few moments later Pat Driscoll, newspaperman, heard a large crash on the second floor of his Brooklyn home. He found Corporal Moxley dangling from the shroudlines of a parachute outside his broken window.

The Corporal, whose only injury was a small cut on one leg, explained to Driscoll that he had just been on a night-practice flight in a two-seater above the city and that the lieutenant had suddenly pointed down at the city lights and shouted: "Jump."

"The lieutenant told me to jump," said the dutiful corporal, "and so I jumped."

Back at Mitchell Field, Lieut. Kelting landed the training plane and said in a puzzled voice: "I pointed down and told him to look and over he went—instead of looking."

NEW MARCH OF TIME FILM HERE SHOWS HOW RED CROSS SERVES THE NATION

How the American Red Cross is serving the nation—and the world at large—during the current war is pictured on the screen of the Theatre here in the latest March of Time film, "Main Street, U. S. A.", which presents and analyzes civilian defense activities in this country today.

The Red Cross is now being called upon for the greatest effort it has ever had to make, the film points out.

In private homes and public meeting places everywhere, the March of Time shows, women of the Red Cross are busy turning out for U. S. military hospitals an immediate quota of more than forty million surgical dressings.

Already fifty million dollars worth of medical supplies and warm clothing have been sent to Europe and Asia for the suffering people of twenty-five nations.

Through the International Red Cross, whose headquarters are still in Switzerland, mail and packages can be forwarded to prisoners of war. At Geneva, the Red Cross maintains a missing persons service. Through it, countless soldiers, sailors and airmen—reported as missing—have been located in enemy hospitals and prison camps.

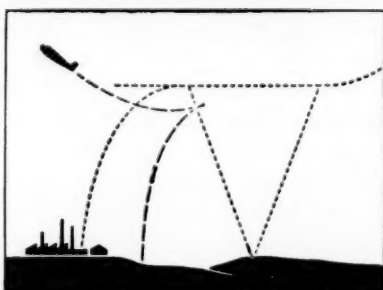
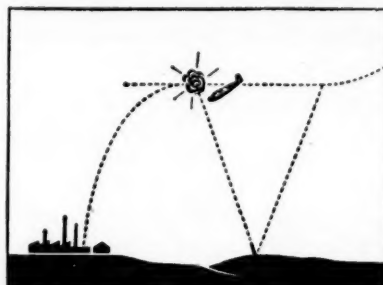
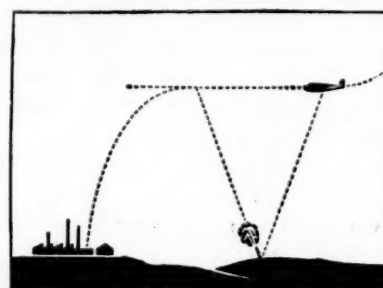
In the United States, a million and a half men, women and children are being instructed in first aid, learning what to do to cut down loss of life in case of air raids. Half a million more women are studying home nursing,

preparing for the day when hospitals may not be able to handle all sick or wounded.

All over the land, the Red Cross is asking men and women, in good health, to donate a pint of blood for a national blood bank—great enough to furnish plasma for emergency transfusions in the Army and Navy.

Today, the March of Time points out, millions of U. S. women, anxious to carry their share of national responsibility, feel that in the ranks of the American Red Cross they can serve their nation well.

It Helps — Even When You Miss!



HOW an anti-aircraft gun can make precision bombing impossible — even if it does not actually shoot down an enemy plane — is illustrated by these diagrams from the latest March of Time film, "When Air Raids Strike". The attacking bomber must fly a steady course long enough to adjust its bombsight. While making this level flight, the plane cannot dodge anti-aircraft fire. The automatic range-finder of the anti-aircraft gun sights the enemy and fires (top). By simple triangulation, the point where plane and projectile should meet can be accurately determined. To avoid being hit, the plane must swerve off course (center) and its bomb load then falls short of the target (bottom).

MARMON-HERRINGTON TRUCKS IN VANGUARD OF BRITISH ADVANCE IN LIBYA

"Britain's dramatic bid for control of North Africa and the Mediterranean ports, now being unfolded in the newspapers, tells a heartening story to American manufacturers of tanks, trucks and armored cars which are playing such an important part in the success of this bold venture," says an official of the Marmon-Herrington Company.

"Pictures, just arriving in this country, of fighting Tommies, Aussies, and New Zealand troops, aboard fleet moving All-Wheel-Drive trucks, prove the amazing efficiency of these vehicles in shifting desert sands. Capable of relatively high speeds, in this difficult service, these American-made trucks with all wheels pulling, have upset the enemy's plans and have given the British an incalculable advantage.

"Among the American equipment arriving at Egyptian ports over the past five months have been hundreds of Marmon-Herrington All-Wheel-Drive Converted Fords, shipped from the Marmon-Herrington plant in Indianapolis, Indiana, and from the Ford Motor Company of Canada.

"Travelling at high speeds which contribute greatly to the element of surprise, these vehicles have enabled the British to cut off whole commands of the enemy at Bardia, around Tobruk, and at other desert points, allowing the combat vehicles, including American tanks, to join battle with the encircled Italians and Germans.

"Marmon-Herrington had the advantage of a 'running start' in the change-over from peace-time to defense production. Our company has been building the same type of vehicles, now in such demand for military service, since 1931. We have been converting standard Ford trucks, commercial cars and passenger cars to All-Wheel-Drive since 1935—and only changes in body equipment, etc., were necessary to make the same units into vehicles of war.

"During the decade just past, thousands of Marmon-Herrington All-Wheel-Drives have made an enviable name for themselves in the most difficult civilian and industrial services, in the oil fields and logging camps, and in road construction and maintenance, snow removal, utility services, etc. Their ability to perform successfully in deep mud, loose sand, dirt and gravel, and across country has made them real money-makers and money-savers for their owners."

In addition to All-Wheel-Drive trucks, the Marmon-Herrington Company is building hundreds of light artillery tractors and combat tanks for our own and friendly foreign governments. The company's plant at Indianapolis, Indiana, has been increased five-fold to meet all of these demands for industrial and defense production.



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AMERICAN WOUNDED LANDED SAFELY AS MACTAN ARRIVES AT SIDNEY

Washington, D. C.—The S.S. "Mactan," Red Cross hospital ship, carrying almost 200 wounded men from General Douglas MacArthur's Philippine forces, has arrived safely in Sydney, Australia, Chairman Norman H. Davis announced today.

Nelson Johnson, American Minister to Australia, cabled Mr. Davis that the wounded had been landed and were "being satisfactorily cared for."

Irving Williams, American Red Cross representative aboard the ship, reported to Mr. Johnson that the cooperation of the Australian Government, Australian Red Cross and civilians had "been thorough and most helpful since arrival of the ship in Australian waters," the cable stated.

The S.S. "Mactan," granted safe conduct by the Japanese Government, left Manila January 1, under charter to the American Red Cross. It was painted with Red Cross symbols, and doctors and nurses from the Philippine Red Cross were aboard to care for the wounded, according to advice received here.

Prior to landing of the wounded, Chairman Davis received the following message from the Australian Red Cross: "In event of sick and wounded Americans coming to Australia, you may rest assured we shall gladly do utmost to provide comforts and give the same service as we do to our own men."

WARRANT OFFICERS PROMOTED TO COMMISSIONED RANKS

(Continued from page 27)

Edgar Clayton Hughes
James Robert Lane
John Garland Johnson
Frederick Belton

Artillery Duty:

Sanford Newell Young
William Franklin Pulver

Motor Transport Duty:

Carl Jesse Cagle

Communications Duty:

Rex Randolph Stillwell
Norman Harold Jungers
George Wilbur Martin
Frederick Donald Davis

CHIEF WARRANT AND WARRANT OFFICERS, WHO HELD COMMISSIONED RANK DURING WORLD WAR I, RECOMMENDED AS FOLLOWS:

To Captain:

Thomas Quigley

To First Lieutenant:

Olin Leech Beall
Charles Marion Adams
Jerry William Blazek

NOT SINGLE HANDED

(Continued from page 34)

delay as possible, of strong patrols of stretcher bearers by the Signal Company."

The same regiment reported on the 5 October concerning the men's physical condition:

"As a result of the men lying for a long time in the open terrain without protection against the weather, cases of cold with fever symptoms have made their appearance. Likewise, the number of intestinal cases was not diminished. Need for rest and an opportunity to care for physical wants is being felt in an ever increasing degree. Likewise, an opportunity is needed for thorough repair and cleaning of weapons, clothing and equipment."

The killed and wounded were real enough, there was no doubt about the lack of food and proper relief, but soldierly spirit was not lacking in this professional report submitted by the 4th Company, 31st Bavarian Infantry on the combat methods of American troops. This data was derived from observation of an American attack on a hill called Blodnitz, on the 8 October. After describing the general situation, ominously the report begins:

"Strangely enough, the Americans deployed for the attack on the north slope, that is, on the side of the hill facing us."

One can imagine that these fighting men of four years' experience found such behavior strange. From an American point of view, the situation rapidly became tragic:

"Even while deploying, the Americans suffered heavy losses in killed and wounded. The various detachments, which in the beginning were marching forward carelessly, were subjected to the combined fire of our light and heavy machine guns. Most excellent results were observed. Great gaps were torn in the skirmish lines and entire columns were mowed down. The light yellow brown color of the American uniforms, entirely unsuited to this terrain, stood us in good stead. They were visible for long distances and offered favorable targets."

There might be these local successes, involving bloody repulses of American and French troops, but still the tired refrain went on:

"Following the major battle of 8 October, the regiment has no more supports or reserves. The troops are completely exhausted. The 3d Battalion has only one light machine gun and the 1st Battalion none. Under these circumstances it cannot be guaranteed that the sector will be held against the strong attack which is expected for the morning of 9 October. Fresh reserves are needed, or better still, fresh troops."

Like a tired, harried animal, the belabored German Army, was able, during the long months of the last half of 1918, to strike out again and again at the ever-closing Allied troops. For all that the increasingly feeble blows came from a retreating enemy, they were nonetheless real.

Since the whole world dreads the involvement of more of the nations in a vast, wasteful, but apparently neces-

sary conflict, there is a tendency on all sides to somewhat relax our efforts when we hear of German reverses. It is a universal hope that the current menace to the peace and security of the world will find the pace too fast, the cost too great, and will collapse before it becomes necessary for us to throw the weight of our armies into the fight. We are eager to believe reports of civilian unrest within Germany, of appalling casualties, or irreparable losses in materials. This is natural enough, perhaps, but a glance at the past should caution us as to the demonstrated staying powers of the Germans. It is not to be despised. Still less is it to be underestimated, even if all our hopes become truth and the Germans be seriously reduced in strength and striking power.

If, on the other hand, the Germans have not received the blows they are supposed to have suffered, if their strength and capabilities remain almost what they have been, then we had better be constant in our devotion to the God of Duty—in preparation for the day we meet the mighty Wehrmacht. And when that day comes we must have made our preparations with the worst, not the best in mind. It might be that history will repeat itself, as everyone seems to expect. But we can't count on history doing the job single-handed.

NEITHER FISH NOR FOWL

(Continued from page 25)

part of the business of keeping the squadron in operating condition. These aviation reports must be a part of the appropriate department of the squadron, handled and supervised by flying officers and men, but purely administrative work could and should be carried on by non-flying officers and men attached for that purpose. Again this is the practice abroad, and our own Army is rapidly approaching it.

When a pilot lands, pulls up to the line, and cuts the switch, it is a far cry from meaning that his job is done for the day. It means rather that he is just beginning a most vital part of his work. It means that crews of men swing into action, perhaps to work all night.

Assume that the pilot is the gunnery officer. From his plane he goes to the gunnery tent to tabulate ammunition expended for results achieved, draw up a report of the performance of guns and men in the air, check defective functioning of involved mechanism, prepare a conference and lecture on the defects noted in the gunnery end of the mission, and review all the activities of his department on the line and in the air. All the planes must be re-bore sighted every few hours, for example, and this takes time and care, but is a single part of his many duties.

Engineering, flight, communications, navigation, and all of the other officers do the same thing. Each pilot

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upon landing fills out what is called a yellow sheet giving RPM's, manifold pressures, fuel and oil pressures and temperatures used on the flight, and noting any abnormal functionings of the plane. If he notes a tendency toward wing-heaviness, a rigging crew starts a check-up. If he notes a slight roughness in the engine, the engineering department starts a thorough search, for slight engine roughness is a symptom of serious trouble somewhere. It is a well-known fact that twelve men on the ground must be on the job for one man in the air, and all the flying personnel handle technical ground duties in addition to their regular flight duties because the motto and rule is, at all costs, to "keep 'em flying."

In time of war and preparation for war an operating squadron is, thus, an extremely busy unit. Under the present organization the commanding officer, executive officer, personnel and welfare officer, group adjutant, post exchange officers, mess officers and the like are forced to sandwich this important work in between their regular aviation duties, when, in fact, the administrative portions of these offices should be carried out by ground officers assigned for that purpose and nothing else.

The particular objectives of any aviation require the greatest concentration and work on the part of all hands, and the successful realization of an aerial mission is preceded by days of intense and detailed planning. The squadron commander and his officers must plan to the most minute degree every approach to the objective, consider the performance of planes and men, compute to the minute, alternate routes of approach and escape, cooperation with ground forces and other aerial forces, and coordinate these and other variables before their unit can leave the ground for its mission—usually hundreds of miles away.

The actual performance of the mission is a punishing, concentrated, slam-bang, several hours of hard physical and mental work. When the squadron commanders and officers return they must not be confronted with desks full of papers referring to personnel records, pay accounts, transfers, and similar administrative work. They have the next day's mission to plan, their aviation duties to perform, conferences to attend, and much needed rest to get.

An operating squadron in time of war is a combat team concerned only with tactical problems. By incorporating into its organization non-flying officers for administrative functions, a great strain would be relieved. The many non-tactical contingencies arising during war time would be handled expeditiously from the ground without adding time-taking work to the already busy squadron flying personnel. A non-flying executive officer, for example, could have a whole camp ready to move to a new site, should such a step be ever necessary, while the commander was away on his mission. Upon the return of the commander the whole movement could be carried out without any loss of time since the executive officer had prepared everything and was ready for the word to go. Organization of this type is of the utmost necessity.

By this is not meant or implied that aviation units should not "stack up" on the drill-field, or be unfamiliar

or even unqualified with small weapons and basic problems of terrain and troop dispositions, but all of these are already a part of their scope and are being dealt with constantly. The important work of air-ground liaison is planned by squadron commanders and senior officers who are fully qualified for the work. They, in turn, completely instruct their men. The much too frequent administrative duties, guards, and drills are of no pertinent use, and in these times are a definite handicap to a specialized work.

It is both feasible and desirable to attach to each aviation unit ground officers and troops to perform their own special functions, which would be carried out in a much superior manner from what they are at present. Units of Marines are attached to all Naval stations for guard and other duties, and there is no reason why they could not assist a part of their own service in like manner.

Such a move would release numerous personnel for more important work and might well assist the non-flying units in becoming familiar with the operational methods of aviation. The administrative officers should be permanent, but a rotation system of assigning the troops would benefit a sizeable number over a period of time. It would recognize the all important proposition of having specialized, expert units each primarily concerned with its essential function, which when put together would present a force of real power.

In every field of work, if we have a special task to be done, we call in a specialist in that type of work whose skill lies in his constant study and practice of his specialty. If Marine aviation is to be as skilled as is to be rightfully expected, its time must be spent on its own problems and not dissipated over the general functions of ground troops and ground duties.

MOVING TARGET RANGE FIXTURES

(Continued from page 23)

extend at least thirty (30) inches above the ground. A block, properly set, and of sufficient size to pass knots or splices in the cable may also be used.

The above set-up works very satisfactorily at any speed from one (1) to about twenty (20) MPH, regardless of the angle of direction change. At faster speeds and with direction changes of less than 90 degrees, the target is snapped around so forcibly that it sometimes turns over, or fouls in the towing cable. (A few practice runs will determine the maximum speed the target may be towed to take the various changes of direction without upsetting or other trouble.) The type of target referred to is the sled, with a 6'x8' or larger target-cloth covered frame.

To eliminate the whipping action of the target on the sharp turns and at speeds over twenty (20) MPH, the operator watches the target and, as the cable jumps the pulley, the motor is cut and the sled caused to turn slowly. After the turn is completed the motor is acceler-



ated to give the desired target speed again. However, this procedure does not work too well, and best results are obtained by keeping the target speed to 20 MPH and under when changes of direction under 90 degrees are used, and not over 30 MPH when the direction change is 90 degrees and over.

On a straight course the sled was towed approximately 45 MPH without trouble.

THEY HAD A WORD FOR IT

(Continued from page 19)

that the Marines of today are the heirs of the traditions and valor of the legions which carried the law and order and civilization of mighty Rome to every corner of the then known world? And would not the motto of the Corps, "Semper Fidelis" as explained to the Candidates during their first week at the Class, have rung a familiar note in the ears of Thracian recruits of a thousand years ago?

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ALMANAC OF THE MARINE CORPS

(Continued from page 50)

June 25

1776: Captain Samuel Nicholas, senior Marine officer of the American Revolution, appointed major. Continental Congress also provided for six captains of Marines. Major Nicholas soon afterwards raised three companies of Marines for the three frigates then being fitted out.

June 25

1918: Second Division Commander's special report of operations around Chateau-Thierry, states:

"At 5 p.m., Third Battalion, Fifth Marines, went forward and cleared the woods of Germans."

The following communication was received by Commanding General, Second Division from General Pershing, Commander-in-Chief:

"Please congratulate in my name those officers and men who took part in the action in the Chateau-Thierry region on the afternoon of June 25th, when 240 prisoners and nineteen machine guns were captured from the enemy."

June 25

1847: Garrison at San Juan Bautista, Mexico, composed of 300 sailors and 115 U. S. Marines, attacked by large force of Mexicans. The attackers were repulsed without loss to the Americans.

June 26

1775: Often have American Marines been recognized by Congress. The first vote of thanks came on November 12, 1775, when the Provincial Congress of South Carolina formally thanked the Navy and Marines for duty well performed the day before. This was preceded by a resolution of the General Court of Massachusetts, passed on June 26, 1775, "That the thanks of this Congress be given to the brave officers and men some of whom acted as Marines who captured the Tender 'Margaretta' and two sloops on May 12, 1775." On other occasions during the Revolution Marines received the approbation of Continental Congress, directly or through thanks to naval officers

(To be continued)

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A SIMPLE APTITUDE EXAMINATION

(Continued from page 17)

lems are written. Work as many as you can in thirty minutes. Do your own work and ask questions only of the officer supervising the examination. Write your name at the top of this sheet.

1. A and B go fishing. A catches 9 lbs. of fish and B catches 14 lbs. A's two biggest fish weigh 2 lbs. each and the others weigh 1 lb. each. B's biggest fish weighs 4 lbs. and his others weigh 2 lbs. each. Who has the most fish A or B?

Answer:

2. You have two fields. One is square and is 100 yards on each side. The other is oblong and is 300 yards long and 200 wide. How much more fence is required to fence the large field than the small one?

Answer:

3. You saw an accident. They saw it. I didn't see it, and he didn't see it, but she saw it and we didn't see it. You, I, he, and she are each one person. We are three people of whom I is one. They are five people. How many people saw the accident? How many didn't see it?

Answer: Saw it..... Didn't see it.....

4. I have five dollars. I lend you two and lend him one. You lend him one and borrow two more from me which you give to him. He gives me one.

Answer: How much money have I?.....

How much have you?.....

How much has he?.....

5. You and I have a walking race. You walk half again as fast as I do, so while I'm walking 6 miles you walk 9 and we've both been walking 2 hours. You decide to rest and while you are resting you go to sleep and I pass you and when you wake up I'm 1 mile ahead of you. How long did you rest and sleep?

Answer:

6. You have \$12.00. You bet half of it at even money on a horse race and win. You bet half of what you have again and again you win. You spend one-third of what you now have and bet half of what you have left and lose. How much money do you have now?

Answer:

7. A and B are having a motorcycle race around a two mile track. After A has gone ten laps B has only gone 9. A has been making 50 miles per hour. How fast is B going?

Answer:

8. A man finds that two dozen oranges, 1½ dozen lemons and 6 quarts of grape juice are required to make 3 gallons of fruit punch. He decides that he needs one gallon more. How many oranges, and lemons, and how much more grape juice does he need?

Answer:

9. 10 plus 11 minus 6 times 4 plus 10 minus 20 divided by 5 = ??

10. You have six apples. I have five. We both give him three apples and he gives me two and I give him one. Which of us; you, I, or him, have the most apples?

Answer:

AN AERIAL BLITZKRIEG IN MINIATURE

(Continued from page 8)

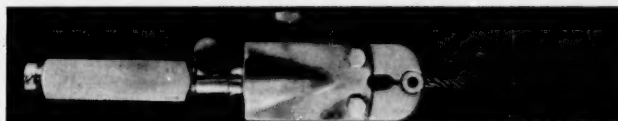
at minimum altitude, effecting a complete surprise. The field at Machala was nothing more than a dry lake bed, but the Capronis landed without incident, and with little or no opposition. Again they took off to the tune of scattered shots as the air infantry moved toward the town. Machala was poorly guarded, despite its importance, and was captured with but the loss of one man.

Meanwhile the Capronis had returned to Tumbes for another load. This time they headed for Puerto Bolivar where there was no landing field, again preceded by an escort of attack planes. The plaza at Puerto Bolivar was of the usual square block size. There was a thin ring of straggling thatch-roofed houses, the railroad station, and the dock. On three sides the jungle crowded close to the town; the fourth side was water. On the dock was a pair of 20-mm. Breda guns, supposedly manned. On the railroad sat three freight cars packed with a variety of military equipment. At 5:30 P.M. there was a sudden roar of motors, a rattle of machine gun fire as the attack planes flashed overhead. The section of lumbering Capronis droned over the village at less than a thousand feet. Parachutes suddenly blossomed, settled into the plaza with their wriggling cargoes. Again a few shots and the Peruvian air landing force had the situation well in hand. One parachutist stuck halfway through a thatch roof and had to be pulled out; otherwise there were no casualties. The garrison was captured intact—one sergeant, one corporal and four guardia civil.

The size of the garrison detailed to guard the majority of the Ecuadorean Army's reserve supplies is indicative of the measure of surprise effected by this operation. The number of parachutists might have been twenty—thirty at the most. A conservative estimate of the size of the garrison which might reasonably have been expected at Puerto Bolivar, considering its vital importance, would have been at least one infantry company with machine gun support. Thus the parachute attack should not have been expected to succeed—but it did. Truly, surprise is the essence of successful war.

There remained but some little mopping up along the railroad. Army troops moved into Santa Rosa and Machala by truck relieving the air forces. The Peruvian Navy occupied Puerto Bolivar. The Ecuadorean army melted away into the jungle, losing all contact with their opponents. Within twenty-four hours a truce was signed, ending hostilities.

Thus ended the first aerial blitzkrieg of the Western Hemisphere, minute in scale but of perfect proportions. The operations of the small Peruvian air force, comparable in size to our air force during the Nicaraguan campaign, may well be considered by future students of minor tactics as a classic example of the employment of air units in small wars.



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Over 90,000,000 is Basketball's yearly attendance...tops for any American sport...and this year marks the celebration of its Golden Jubilee. The game was founded by Dr. James Naismith and had its modest start in 1891 in Springfield, Mass. **Such popularity must be deserved**

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